Towards A Schizogenealogy of Heretical Materialism: Between Bruno and Spinoza, Nietzsche, Deleuze and other Philosophical Recluses

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summary

The central problematic of this thesis is the formation of a philosophy of creative matter, a philosophical materialism, deriving from the work of Gilles Deleuze and Félix Guattari, and based substantially upon an examination of the consequences of their engagement with the philosophical tradition. I have supplemented the writers used by Deleuze and Guattari with the resources of Giordano Bruno's philosophy, as well as numerous examples and arguments from the natural sciences. Bruno is particularly important here, in that in his work and life, materialism is most tightly bound up with monism. Philosophical materialist monism can be crystallised as a sustained meditation upon one problem: that of the overcoming of dualism; and in this sense to speak of materialism is to speak of the problem of hylomorphism. The hylomorphic model, formalised by Aristotle, and operative in both philosophy and science, implies both a transcendent form that organises matter, and a dead matter, passively moulded by the imposition of that form. These ontological and epistemological assumptions have clear political and theological ramifications, contributing to an abstract diagram of State power. The critique of this model calls for a philosophy of active, self-organising matter— a necessarily heretical, materialist thought, constitutionally opposed to all transcendent powers.

I In this chapter I produce a performative diagram of DeleuzeGuattari's understanding of the heterogenetic nature of the concept by examining those of drive, assemblage, multiplicity. The case used here is the linked complex of problems associated with death and entropy. These issues are posed throughout as means of indicating Deleuze and Guattari's challenge to dominant modes of philosophising.

II Here I offer an elaboration of Deleuze and Guattari's relationship with cybernetics, through an outline of the work of Gilbert Simondon. The principal concepts developed here, are individuation and becoming. This is followed by extensive critiques of hylomorphism and autopoiesis. The categories of minor or nomad, and major or State, sciences, are introduced along with the related concepts of following and reproducing.

III This chapter explores the oppositions between consistency and organisation; immanence and transcendence. Here I read two of Deleuze and Guattari's key concepts— intensity and incorporeal transformation— in terms of Spinoza and Schelling respectively. Symbiosis and morphogenesis are examined as examples of the minor sciences introduced in the previous chapter. The minor then poses the questions of invention and pragmatics in philosophy.

IV This chapter is devoted to a critique of Manuel De Landa's reading of Deleuze and Guattari that aims to demonstrate, against his claims, the centrality of Marx to their philosophy. The chapter also elaborates upon the concepts of Geophilosophy, the machinic phylum, and machinic surplus value.

V This chapter offers a set of elaborations upon the nature of the materialism produced by bringing the thought of Giordano Bruno into contact with that of Deleuze, thereby transforming both. Inverted vitalism is posed as a key marker of Deleuze's genealogy. I show the identity of metaphysics and politics, and its role in an account of materialist heresy.

VI The final chapter consists of a critique of Kant's claim to being 'Copernican', and Copernicus' claim to being revolutionary. It demonstrates the extent of Bruno's cosmological revolution. I use Nietzsche's 'perfect nihilist' to further the ideas of invention and heresy advanced earlier, to end with a demonstration of philosophy's ever present becomings hybrid, as opposed to dominant ideas of its being in a permanent state of mourning.

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Philosophy's Mathematical Straitjacket

it is of course clear why our academic thinkers are not dangerous; for their thoughts grow as peacefully out of tradition as any tree ever bore its apples: they cause no alarm, they remove nothing from its hinges; and of all their art and aims there could be said what Diogenes said when someone praised a philosopher in his presence: 'How can he be considered great, since he has been a philosopher for so long and has never yet DISTURBED anybody?' That, indeed, ought to be the epitaph of university philosophy: 'it disturbed nobody'.

(Nietzsche 1983 194)[1]

Most materialists, even though they may have wanted to do away with all spiritual entities, ended up positing an order of things whose hierarchical relations mark it out as specifically idealist. They situated dead matter at the summit of a conventional hierarchy of diverse facts, without perceiving that in this way they gave into an obsession with the *ideal* form of matter, with a form that was closer than any other to what matter *should* be. Dead matter, the pure idea, and God.

(Bataille I 179)

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If out of the multiplicitous, polyvocal and heterogeneous corpus of Deleuze and Guattari's thought one can isolate a defining characteristic it would be the relentless attempt to construct a series of dynamic maps, of immanent forces and constitutive relations, of trackings of lines of power and affect. The combination of these terms in Deleuze and Guattari's thought indicates a revolt against philosophy as the system of judgement and principles, an advocacy of "a logic of sense and the event, and not [...] a logic of predication and truth" (Deleuze 1969/90 151/111), so that in every area of concrete enquiry, one is confronted with an infinitely growing set of immanent explorations set in motion, and constituted by drives. Slavoj Zizek notes that the introduction of a concept of drive (by Freud for Zizek), guarantees "radical immanence" (Zizek 1997 84). This connection between immanence and drive appears at numerous points, in several guises in Deleuze's work related variously to Spinoza's conatus, Nietzsche's will to power, Bruno's creative power of matter. Etienne Balibar, in a remarkable article articulating two thinkers, central to Deleuze's thinking but not usually related— Spinoza and Simondon— has also expressed this commitment, argued here to be common to all of the figures in Deleuze's genealogy, not just the two to which Balibar applies it. Commenting on the underlying perspective of immanence in both Leibniz and Spinoza, by which, Balibar writes "any individual can be singularised only under the effect of its own inner activity, which can be conceived as some 'force' (*conatus*), some 'energy' (*vis*), some 'tendency' (*appetitus*), or some 'desire' (*cupiditas*) to realise all its possibilities" (Balibar 1993 32). The different forms of this concept of drive will be continually returned to throughout this work, and in one sense hold it

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together, it is dealt with at greatest length in the first chapter dealing with Deleuze's complex, multifaceted deployment of the concept of the death drive; and in the fifth, which stages an engagement between themes in Deleuze and in Giordano Bruno. The concept will have to pass here without lapidary definition, indeed as with all of Deleuze and Guattari's concepts, it is characterised by its resistance to such definitions, it being constituted only through use, through its immanent emplacement in specific concrete assemblages. Hence the concept has no definition, only sense or productive effect. It is for this reason that it is insisted that philosophy is neither a closed system, a totality, nor is it a jigsaw puzzle, its pieces having neat edges that can be exactly fitted together in one way and one way only; rather it is an assemblage of ill fitting, sometime overlapping machine parts each of which has no single purpose, but is combined with other such parts only in response to a particular question. In a sense Bataille's attack on the dictionary applies particularly well to philosophy as practised by DeleuzeGuattari. Bataille writes that "a dictionary begins when it no longer gives the meanings of words but their tasks [...] Philosophy has no other aim than fitting all that exists into a straitjacket, a mathematical straitjacket" (Bataille I 217). This straitjacket, composed variously of Platonic forms, Kantian categories, "the judgements of god", is what Deleuze and Guattari's thought attempts to relinquish. It is to this end that Deleuze introduces the idea of plasticity, initially with regards to the place of *will to power* within the formation of a *superior empiricism*, the reconciliation of principles with empiricism. A "*plastic* principle [is one that] is no wider than what it conditions, that changes itself with the conditioned and determines itself along with what it determines", as

such the plasticity of concepts is an index of their immanence, or flatness, with that which they determine; a plastic concept "is never superior to the ways that it determines a relation between forces, it is always plastic and changing" (Deleuze 1983 50).

Faultline

In the *Logic of Sense* Deleuze makes it clear that he considers philosophy to be organised around a fundamental faultline "established between those who linked sense to a new transcendence, a new avatar of God and a transformed heaven, and those who found sense in man and his abyss, a newly excavated depth and underground" (Deleuze 1969/90 98/71). The presentation of this critique is important, for it is cast as a distant precursor of a central concept of Deleuze and Guattari's final joint work, *What is Philosophy?*, that of the conceptual persona. Here we are presented with the idea of an 'effect', as a bearer of sense, we are offered the examples of effects in science and medicine, in which an "effect is [...] designated by a proper name", or a disease named for the doctor who elaborates its symptoms. In *What is Philosophy?*, this idea is returned to, to give form to the creative imperative of philosophy, the demand that the philosopher "completely changes the image of thought" (Deleuze and Guattari 1990/94 63/65). To return now to the critique, Deleuze goes on to give two, perhaps three, thinly veiled, examples of philosophers on the former side of his faultline, the first obviously is Kant, since whom Nietzsche writes: "transcendentalists [...] have been emancipated from the theologians: what joy!— Kant showed them a secret path by which they may, on

their own initiative and with all scientific respectability, from now on follow their 'heart's desire' (Nietzsche 1969 III § 25). This Kant is, for Deleuze, the perpetrator of a new theology and a new humanism, pacing beneath the "misty sky [...] of Königsberg" (Deleuze 1969/90 98/71), and in whom "both God and the I underwent a practical resurrection" (Deleuze 1968/94 117/87). The second philosophical persona, author of the second philosophical effect, is perhaps Heidegger. The latter will, in *What is Philosophy?* be called the "strict professor [...] perhaps madder than he seemed", for whom "sense is presented as Principle, Reservoir, Reserve, Origin [...] said to be fundamentally forgotten or veiled [...] deeply erased, diverted and alienated" (Deleuze 1969/90 99/72). We might also hear in this the sound of a Derrida, especially when written in 1969, for he had recently published the trilogy of works, *Of Grammatology*, *Writing and Difference*, and *Speech and Phenomena*, all in 1967, in which he would seek to place transcendental principles *sous rature* (or under erasure). The trenchant critique of Derrida and his rhetoric of presence continues along two lines— and this passage alone should serve as rebuke to the many commentators who seek to impose common purpose on the respective positions of Derrida and Deleuze— first, to suggest that beneath the "erasure and the veil, we are summoned to rediscover and to restore meaning, in either a God which was not well understood, or in a man not fully fathomed" (Deleuze 1969/90 99/72). And second, by offering sketches of how Deleuze will read two figures who are of great importance to Derrida, that is Nietzsche and Freud, in ways that are totally antithetical to him. The form of the distancing from the current reading is clear and emphatic, for with regards to both Nietzsche and

Freud, Deleuze writes that "We do not seek in" Nietzsche, Freud, a prophet of reversal and transcendence, schemas for interpretation respectively (Deleuze 1969/90 99/72).

Whilst most contemporary philosophies have adopted variants of Derrida's textualism, embodied in his declaration *il n'y a pas de hors-texte*, *texte*, Deleuze and Guattari have simultaneously retrieved, and invented, a distinctive tradition of materialist thought, one that stakes itself upon the following of "matter in movement, in flux, in variation, matter as a conveyor of singularities and traits of expression" (Deleuze and Guattari 1980/87 509/409). The specific details of this materialism of immanence are further worked out throughout the thesis and in particular in the treatment of the critique of hylomorphism in chapter two. Whilst the Kantian critical revolution is conventionally taken to be the foundation of modernity, an assumption that is severely criticised here in the chapter dedicateds to Giordano Bruno, it is a modernity harbouring the covert mission of a "renovated theology" (Deleuze 1983 93). This mission, clearly marked from its inception by a legislated repugnance for Spinozism, did of course have dissenters, and in the immediately post-Kantian period, one of the most notable of them was Friedrich von Schelling. One of the themes running through this thesis, then, is the location of Deleuze and DeleuzeGuattari's work in what I describe as a tradition of *heretical materialism*, a tradition that is not just heretical *vis a vis* mainstream, or State philosophy, but also heretical with regards to the image of materialism constructed for it by that State philosophy. The characteristics of this heretical tradition will be explicated continually, and I will not attempt to summarise it

here. Needless to say it includes those names familiar from Deleuze's own work, but is supplemented by two significant others: Giordano Bruno and F. W. J. Schelling, two writers who have traditionally neither been accorded a place within materialism, nor have they been discussed in relation to Deleuze[2]. The images assigned to these writers, that of Hermetic magician (Yates 1964), and "the last great representative of anthropomorphic, prescientific theosophy" (Zizek 1996 7) respectively will have to be dispelled, and their ground dismantled.

Schelling's work represents a massive attempt to engage with both Spinoza, and importantly for this thesis, with Giordano Bruno (going so far as to name one of his dialogues in the latter's honour, the 1802 *Bruno, oder über das göttliche und naturliche Prinzip der Dinge*), the grounds for this engagement is the need to move beyond Kantianism, and principally with a need to overcome the vast distance that the Kantian system had opened up between man and the rest of the cosmos. Hence Schelling's critique of what he sees as the lack of "the requisite humility", in what is clearly meant to be Kantianism, which insists upon "beginning everything straight away with the highest concepts and bypassing the mute beginnings of all life [...] this overhasty nature that would rather bedazzle from the very start with spiritual concepts and clichés than descend to the natural beginnings of every life" (Schelling 1997 148). Spinozism in its various manifestations is taken, in this thesis, principally as a sign for a thought of active matter, or hylozoism, hence a thought of immanence, and as the principal means of making man into an active part of

nature. It is in the name of a Spinozism that Deleuze and Guattari create a philosophy that is a positive discipline, in contradistinction to its two dominant characterisations, it is neither the Lockean under labourer nor the Kantian prescriber of limitations; as such it has a positive, creative task, governed by the recognition that "there is no other truth than the creation of the New: creativity, emergence" (Deleuze 1985/89 191/147), and by the Nietzschean demand to make philosophy experimental (Nietzsche 1974 § 110). This positive task of philosophy is defined on occasion by Deleuze and Guattari as the invention of concepts, or of multiplicities (this sense of invention will be continually explicated throughout this thesis). These concepts are possessed of two dominant characteristics: immanence and transversality.

Deleuze and Guattari's approach resonates with Schelling's critique of the top-down tendencies in philosophy that he rejected in favour of his wonder that: "Even the smallest grain of sand must contain determinations within itself that we cannot exhaust until we have laid out the entire course of nature leading up to it" (Schelling 1997 122). It is these multiple, heterogeneous becomings that constitute DeleuzeGuattari's field of study: "multiplicities, lines, strata and segmentarities, lines of flight and intensities, machinic assemblages and their various types, bodies without organs and their construction and selection" (Deleuze and Guattari 1980/87 11/4).

What these objects hold in common is their character of being always already multiple, already differential, they cannot be plotted as points

but rather must be diagrammed, with attention paid not to points but to the lines between the points; and as Deleuze has said of these lines, "lines aren't things running between two points; points are where several lines intersect" (Deleuze 1990/95 222/161). In so far as both Nietzsche and Spinoza are philosophers who affirm the one, and who affirm the multiple within this one, this project is distinctly marked by them. For both, to parallel the preference alluded to above, the most amazing question is not that of the soul or spirit which "seems to me to be actually a life-endangering, life-caluminating, life-denying principle" (Nietzsche 1968 § 644) but that of the body. As Deleuze writes, of a body "we will not define [it] by its form, nor by its organs and its functions, nor as a substance or a subject [...] we will define it by *longitude* and *latitude*" (Deleuze 1988b 127; Spinoza 1985 E IIP13L1). The former, longitude, indicates a mode of defining a body by "the set of relations of speed and slowness, of motion and rest, between particles that compose it from this point of view"; whilst, latitude is "the set of affects that occupy a body at each moment". The two taken together constitute a map. The centrality of cartographic strategies to the DeleuzoGuattarian project is fundamental, allied as it is, to the intensive working out of the concept of the machinic. The radicality of this aspect of their work is too often understressed (whilst that of Spinoza's is ignored or subject to massive distortion). The reading that I am proposing here exposes the failure to properly mark the subaltern path, the heretical materialist path, out of the currently canonised philosophical tradition indicated by the way in which Deleuze and Guattari mobilise Spinoza. The reading of Spinoza initiated by Deleuze, and furthered in the joint works with Guattari, indicates a massive

critique of ontology. The Spinoza offered here, though materialist, is far from the determinism attributed to him by orthodox readings, his matter is not the dead, brute force of the hylomorphic scheme, but the site of intensive individuation. Spinoza's construal of the body, of materiality, is not of a homogeneous mass but a concatenation of differential forces, "distinguished from one another by reason of motion and rest, speed and slowness, and not by means of substance" (Spinoza 1985 E IIP13L1).

This thesis, a contribution to a Schizogenealogy of heretical materialism, attempts to survey the history of philosophy, scanning it for those moments where philosophy invents new concepts that contest the story that philosophy tells of itself. We shall see how these events occur where matter erupts into a State philosophy beholden to transcendence and theology. In this way, political-philosophical heresy is shown to be ineluctably and constitutively tied to materialism, and not just to any materialism, but to a materialism on the side of matter, and its self-organisation, a materialism that refuses the image foisted upon it by transcendence. As Bataille shows in the epigram above, most materialism has been idealist insofar as it "situated dead matter at the summit of a conventional hierarchy" and so "gave into an obsession with the *ideal* form of matter" (Bataille I 179). Bataille has sketched this scheme in the lecture included as an appendix here, indicating how, following its theological framework, philosophy has evaluated matter as evil or inert. By reclaiming those moments where this scheme is challenged we gain new conceptual weapons to be utilised in the *Kampfplatz* that is contemporary philosophy.

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chapter i

Entropic Tendencies: Nomological Processes, Death, DeleuzoGuattarian Practice

It is absurd to speak of a desire for death that would oppose itself qualitatively to the desires for life. Death is not desired, there is only death that desires, by virtue of the body without organs or the immobile motor, and there is also life that desires, by virtue of the working organs.

(Deleuze and Guattari 1974/83 393/329)

every time a line of flight turns into a line of death, we don't invoke an internal drive like the death instinct [instinct de mort], but again an assemblage of desire that puts into play an objectively or extrinsically definable machine.

(Deleuze and Parnet 1977 171)[3]

Artaud expresses the multiplicity of fusion, fusionability as infinite zero, the plane of consistency, Matter where there are no gods; principles as forces, essences, substances, elements, remissions, productions; manners of being or modalities as produced intensities, vibrations, breaths, Numbers.

(Deleuze and Guattari 1980/87 196/158)

We are not invoking any kind of death drive [pulsion de mort]. There are no internal drives in desire, only assemblages. Desire is always assembled; it is what the assemblage determines it to be.

(Deleuze and Guattari 1980/87 280/229)

The principal concern of this chapter is to make a deviation through DeleuzeGuattari's work, not to engage in a direct exposition of their various dicta, statements etc. upon the field of problems indexically located under the heading, 'death': an entity treated either as a transcendental problem in the field of philosophy, or as an object of ethical speculation around which a series of *bons mots* or ethical statements circulate.

Rather, the concern is with the relationship between one construction of death— principally that found in Freud's 1920 account of the death drive, or rather one swathe of problems in which death figures, as a predicate of materiality— and the explosion of this figure into the expansion of DeleuzoGuattarian procedures, understood as an entirely novel development within a certain philosophical materialism. The figure of death then is demonstrated to be an extraordinarily productive resource for the invention of the specific problems that mark out DeleuzeGuattari's philosophical territory.

Ever since its Kantian fixing— or more precisely its Husserlian fixing as an appearance to consciousness as fact— as the form of the transcendental question, death has played out its role within humanist philosophy as the figure of the noumenal. This noumenalisation is the deep conceptual reason why death has been relegated to the realm of ethics. However, in emphasising the double aspect of death, after Blanchot, Deleuze has made those aspects of death that have traditionally been considered 'noumenal' to be the source of a profound meditation on the 'event' of death; and has shown, as Foucault pointed

out, death to be the very form of the event (see Foucault 1977 173). To remain within the framework of the Neo-Kantian liberalism that dominates both wings of contemporary philosophy, that is to say the phenomenological or deconstructive, and the analytic, is to continue mistaking death for a personal limit. This is to continue treating death as an empirical fact discussed within a discourse distinguished, if by nothing else, than by its pieties and by the obfuscation of what can only be described as a reconfigured religiosity. To evade this tradition means to investigate the resources of materialism: roughly a line stretched out— as has been said— between Bruno, Spinoza, a non-Oedipal Freud, and the work of DeleuzeGuattari.

Finally, this chapter is, in part intended as a performative illustration of the *heterogenetic* and immanent character of the concept in DeleuzeGuattari's work. Deleuze speaks of the assemblage as the bringing into relationship of disparate singularities, of elements from heterogeneous series Here the principal concepts are intensity, drive, multiplicity, and far from being imposed, an attempt is made to extract them from the material examined. In this case the line followed is that of death and its figuring in a range of disciplines from Freud's non-Oedipal, or pulsional work, to the development of thermodynamics from a linear entropic narrative promising an apocalypse given in the Heat Death of the universe, to its development into an account of infinite productive complexity.

Entropic Tendencies: Nomological Processes

Pulsional Freud, Oedipal Freud

Deleuze, and DeleuzeGuattari's various treatments of the concept of the death drive constitute a complex, multi-dimensional diagram of a heterogeneous terrain. Notionally the concept is constructed and deployed within the field of psychoanalysis. Here, its position in a series of different disciplines is examined, and its place amongst the governing figures of Deleuze and Guattari's construction of libidinal or energetic materialism is explicated. As a point of scholarly rectitude it might also be worth noting that the specific figure of the drive in Deleuze has an ur-source in his treatment of the Spinozist *conatus*, a doctrine which if it mobilises nothing else in DeleuzoGuattarian thinking, mobilises the thinking of the Body without Organs. The BwO in the twin volumes of *Capitalism and Schizophrenia* is always associated with Spinoza, it is not for nothing that the *Ethics* is named as the "great book of the BwO" (Deleuze and Guattari 1980/87 190/153); it is further invoked as a weapon against any humanist, therapeutic or interpretative use of the death drive. This is meant in the fashion of *Logic of Sense* — and this is the principal critique of Freud in the *Anti-Oedipus*— that what is sought in Freud is not that he be "an explorer of human depth and originary sense" but rather "the prodigious discover of the machinery of the unconscious" (Deleuze 1969/90 100/72). Hence for DeleuzeGuattari it is always a question of sense and not meaning, of production and not representation, the factory of the unconscious rather than the theatre of representation (Deleuze and Guattari 1974/83 31/24). This latter disastrous shift, marking the replacement of the pulsional, materialist Freud, with "a new brand of idealism" is dated to the introduction of

Oedipus, and as the title of Deleuze and Guattari's first book makes abundantly clear: it is a polemic *Anti*, against, Oedipus.

The death drive predates Oedipus. However, the Manichean struggle between Eros and Thanatos, will not be seen as a means of deriving a master schema for psychodramas, but will be placed within the complexity of a thinking of force, tendency, intensity and matter. Freud's 'Beyond the Pleasure Principle' of 1920, where "he engaged most directly— and how penetratingly— in specifically philosophical reflection" (Deleuze 1989 111), as well as being the *locus classicus* of the death drive occupies a privileged position in the thermodynamic discourse of the subject, in the materialist energetic Freud. Consequently, it has a critical role to play in DeleuzeGuattari's production.

> It is free action, however, which by its essence unleashes the power of repetition as a *machinic* force that multiplies its effect and pursues an infinite movement [...] Traits of expression describing a smooth space and connecting it with a matter-flow thus should not be confused with striae that convert space and make it a form of expression that grids and organises matter (Deleuze and Guattari 1980/87 622/498)

To examine the multiple status of the death drive and the series of questions that it opens up in Deleuze's work, in particular as it appears in Freud's 'Beyond the Pleasure Principle', will take us back to some of

Deleuze's earliest texts, principally *Coldness and Cruelty*, *The Logic of Sense*, and *Difference and Repetition*, all of which contain lengthy and detailed treatments of this area. We will also attempt to follow this thread in the multiple tracks it carves through the collaborative twin volumes of *Capitalism and Schizophrenia*.

The death drive constitutes a paradigmatic diagram— understood as "the presentation of pure relations between forces or the transmission of" singularities (Deleuze 1988a 82)[4]— of what DeleuzeGuattari describe as Noology, "the study of images of thought, and their historicity" (Deleuze and Guattari 1980/87 466/376). How, it is asked, does the death drive connect with "the forces of the outside" (Deleuze and Guattari 1980/87 467/377)? What kind of war machine is mobilised by putting the death drive in to the centre of the DeleuzoGuattarian project?

Death, Twice

First a warning: in spite of metaphorical temptations and disciplinary pressures, all too common in the 'critical' literature, we must beware of settling for Freud's understanding in 'Beyond the Pleasure Principle' in which the death drive is flattened to a "return to inanimate matter" (Deleuze 1968/94 137/104). Deleuze thinks this so important that he repeats the warning elsewhere: we must not accept a picture of death and of the drives in which it is read as a "tendency towards increasing entropy or a return to inanimate matter" (Deleuze 1968/94 333/259). Freud, coming only superficially close to Spinoza's *conatus* writes of the

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"universal endeavour of all living substance— namely to return to the quiescence of the inorganic world" (Freud 1920 267). As Deleuze makes clear, the problem with the Freudian model is that it remains "inseparable from the positing of an ultimate term, the model of a material and bare repetition and the conflictual dualism between life and death" (Deleuze 1968/94 137/104). Not least of the problems with this model is its completely inadequate dualist understanding of both life and death. Against the Freudian model we must insist that the difference between "death as an empirical event and death as an 'instinct' or transcendental instance" (Deleuze 1968/94 149ff/112ff) be maintained, hence, contra Freud who restricts his model of death to a purely physical entropic model, Deleuze seeks to add a noncorporeal account, an account of death as an event. Whereas Freud restricts death to "the return of the living to inanimate matter" giving death "only an extrinsic, scientific and objective definition" (Deleuze 1968/94 147/111), and thus refuses death any other dimension. Deleuze seeks to restore this other dimension to death by making a distinction, following Blanchot, between a 'personal' and an 'impersonal' death. This first is the one to which Freud is restricted; Deleuze, on the other hand, seeks to pursue the second, impersonal death, "the other face, or aspect of death" which "refers to the state of free differences when they are no longer subject to the form imposed upon them by an I or ego, when they assume a shape which excludes *my* own coherence no less than that of any identity whatsoever" (Deleuze 1968/94 149/113). Curiously, Freud's essay contains the germ of such an account, but leaves it separate and unintegrated. Herein lies the problem, for Freud does not integrate the account of the death drive, the account of cosmic entropic

linear time (chronos), with the central section of the essay: the introduction, in the account of the *fort-da* game, of repetition, the account of local cyclic time (aion), the time of complexity and of the eternal return. Repetition "as conceived by Freud's genius is in and of itself a synthesis of time— a 'transcendental' synthesis. It is at once repetition of before, during and after, that is to say it is a constitution in time of the past, the present and even the future" (Deleuze 1989 115).

Deleuze's account of death as event is perhaps best summed up in his last published piece, the moving 'L'immanence: une vie…', a Lucretian dismissal of the fear of death (Lucretius 1947 3 830). Deleuze writes that "Between life and death, there is a moment which is no longer just that of *a* life playing with death. An individual life gives way to a life which, impersonal yet nevertheless singular, extricates a pure event from the vicissitudes of the interior and exterior life, that is to say from the subjectivity and objectivity from which it comes [...] It is a haecceity, which is no longer individuation, but singularisation: a life of pure immanence" (Deleuze 1995 5). The achievement of Deleuze's reworking of Freud's account of the death drive ,such that it is able to incorporate a death on the side of repetition, apart from making it consistent with the new non-linear thermodynamics, is to demonstrate the truly great philosophical depth of Freud's essay— the recognition of the synthesis of time given in repetition. It also enables us to reconsider, on a renewed materialist basis a philosophical question that up to now has been considered only in terms of a Derridean and Lacanian 'petrification' (Guattari 1995 74) of Freud as a reader of texts. That is the question of iterative afterwork, *Nachträglichkeit*. In

Deleuze this question is explicitly posed in opposition to the readings of Freud defended by Derrida and Lacan. Deleuze's major discussion of the question opens thus: "the question of whether psychic experience is structured like a language", as in Lacan's famous formulation, "or even whether the physical world may be regarded as a book" (Deleuze 1968/94 160/122), as in Derrida's all consuming textualism[5]. For Deleuze, both of these questions are subject to the tyranny of the signifier and the pursuit of an originary presence, and both can be critiqued from a position suspended between Freud and Nietzsche. As we have seen and as we shall see throughout this thesis, Deleuze's incorporeal materialism is predicated upon a difference-in-itself, according to Gilbert Simondon's principle that "ontogenesis [the process of individuation, EA] becomes the point of departure of philosophical thought; it really will be first philosophy", and so contrary to Lévinas' claim that ethics is first philosophy; in this perspective "ontogenesis precedes ontology" (Simondon 1989 163). This is the ground for a rejection of there being any original ground of plenitude to which we can return or a telos to which we are heading, or equally of a truth that we can discover[6]. Rather, Deleuze's world governed by the eternal return, the groundless 'law' of a world which is a "monster of energy" "excludes the assignation of an originary and a derived as though there were a first and second occurrence, because the sole origin is difference [...] the absence of any assignable origin— in other words, the assignation of difference as the origin" (Deleuze 1968/94 164/125).

Nonetheless, an association of the Death Drive— a force dragging bodies (in the wide Spinozist sense) towards death, dissolution and

dissipation in an undifferentiated energetic soup— with the irreversible tendency of the Second Law of Thermodynamics is a necessity, for DeleuzeGuattari insist that the unconscious belongs to the realm of physics "the body without organs and its intensities are not metaphors, but matter itself" (Deleuze and Guattari 1974/83 336/283). However, the complex, and now complexified, structure of nonlinear thermodynamics allows for a stratification of the dimension of time, we can integrate local repetitive cycles (the cycle of the fort-da game) with an exponential movement towards maximal entropy (Thanatos). The critical distinction running just beneath the surface of this enquiry is that between telos (and its contemporary definition as teleonomy) and tendency. The stating of this distinction here has the specific purpose of disengaging acceptance of a thermodynamic framework from the millenialist craving for a revelation (apocalypsis) of the truth of the world, Wiener's universal Ragnarök (Wiener 1950 32) that were, as we shall see, attendant upon it in the nineteenth century. This needs to be stated more strongly and in two distinct ways. First, by seeking, albeit indirectly, to answer, and also to investigate the role played by, Deleuze's linked questions as to why Nietzsche was "interested in the energetics of his time" to "discover what it was that he sought to find in the science of intensive quantities" (Deleuze 1968/94 313/243)? And further to discover "what Nietzsche means by noble" in the context of his borrowing "the language of energy physics and call[ing] noble that energy which is capable of transforming itself" (Deleuze 1968/94 60/41, also 1983 42 and 55)? Investigating and answering these questions can only be done by providing a philosophical account, culled from a Nietzschean and Deleuzian perspective, in which elements of

thermodynamics are deployed in a resolutely anti-teleological fashion, analyses of such sort being rejected as indissolubly theological. Second, scientifically, with an examination of more recent interpretations of thermodynamics, principally Prigogine's nonlinear refinements which places it beyond mechanistic interpretations, such that entropy becomes an index of complexity.

Final States, Eternal Processes

Philosophical critiques of mechanism however, long predate the scientific, principally being found in a tradition threaded from Bruno to Schelling, thence to Nietzsche and Deleuze. As Nietzsche, echoing Schelling almost verbatim who is in turn echoing Bruno, repeatedly stresses, "if the motion of the world aimed at a final state, that state would have been reached [...] the world as a circular movement that has already repeated itself infinitely often and plays its game *in infinitum*" (Nietzsche 1968 § 708, 1066). Theses positing a beginning or end, whether it be the account of Genesis, or a Big Bang, the Day of Judgement, or the Heat Death of the universe are born from the same theological source[7]. As noted, Nietzsche's critique of any thesis that posits an end, at the same time of mechanism (ie. reversibility), is an echo of Schelling's, couched in the question "Has creation a final goal? And if so, why was it not reached at once?" Elsewhere Schelling has a stunning rejection of mechanism: "If, as a few supposed sages have claimed, the world were a chain of causes and effects that ran backward and forward to infinity, then there would in truth be neither past nor future. But this nonsensical thought should rightly have

vanished along with the mechanistic system to which alone it belongs" (Schelling 1997 120). Indeed Spinoza is quite clear in the astonishing Appendix to the first part of the *Ethics*— an Appendix that deserves to be recognised as the true precursor to the critique of ideology and theological unreason, the "asylum of ignorance", and of the power-knowledge complex— that "not many words will be required to show that Nature has no end set before it, and that all final causes are nothing but human fictions" (Spinoza 1985 E I appendix). This part of Spinozism is important in the way in which it connects to a key thread in the materialism adhered to, and developed by, DeleuzeGuattari. That is the critique of mechanist or determinist materialism, a telling symptom of this for example is the complete absence in DeleuzeGuattari's work of any reference to Eighteenth century French materialism (La Mettrie, Holbach) which is perhaps, along with Stalinism, the zenith of such a determinism, a materialism of clockwork, and critically of a dead matter. This is the materialism that,as we have seen, Bataille castigates in the following precise terms:

> Most materialists, even though they may have wanted to do away with all spiritual entities, ended up positing an order of things whose hierarchical relations mark it out as specifically idealist. They situated dead matter at the summit of a conventional hierarchy of diverse facts, without perceiving that in this way they gave into an obsession with the *ideal* form of matter, with a form that was closer than any other to what matter *should* be. Dead matter, the pure idea, and God (Bataille I 179)

Developing a position out of their varied resources, Deleuze and Guattari's diagramming approach attempts to produce a rigorous method with regard to the selection of problems: tendential developments understood as intensity shifts (becoming, process). The axis here is that produced, in Michel Serres' words, by "the theoretical reconciliation between information theory and thermodynamics [that] favours and advocates the practical reconciliation between those funds of knowledge which exploited signs and those which exploited energy displacements" (Serres 1977/82 270/81). The importance of this synthesis is to allow for the introduction of what I have described above as a massive *plasticity*, or fluidity into the way in which we are able to manipulate concepts. The importance of Serres' work for DeleuzeGuattari is inestimable, implicated as it is on the base level of the series of distinctions clustered around the 'royal', the 'nomad' or the 'minor' (Deleuze and Guattari 1980/87 446/361), and more specifically for their consistent engagement with a series of questions derived from the manifold deployment of thermodynamics. This deployment allows for the introduction of a series of inquiries related to irreversibility, probability, population, complexity.

Prigogine's Critique

> "The cosmologists had predicted an eventual heat-death for the universe (something like Limbo: form and motion abolished, heat-energy identical at every point in it); the meteorologists, day-to-day, staved it off by contradicting

> with a reassuring array of varied temperatures" (Pynchon 1987 5)

The possibility of a thermodynamics no longer limited to the end-game scenario of its nineteenth century incarnation was opened up by the work of the physicist Ilya Prigogine in the 1960 s. Prigogine's breakthrough came from his development of a non-linear thermodynamics, and his research on 'dissipative structures' which resulted in an account of the production of order out of chaos in open systems far from equilibrium: self-organisation. His innovation, well summed up by Capra, was to move beyond the framework of classical thermodynamics in which "the dissipation of energy in heat transfer, friction, and the like was always associated with waste. Prigogine's concept of a *dissipative structure* introduced a radical change in this view by showing that in open systems dissipation becomes a source of order" (Capra 1996 88-9). In this way, Prigogine's work appears as the physical confirmation of the concept of excess that Bataille had audaciously elaborated in his work on the general solar economy in the *Accursed Share*. Prigogine, in a reversal of the classical evaluation, shows how prodigious excess is productive, rather than wasteful (similarly, an important finding of symbiogenetic biology is that 'germs', should not just be understood as bringers of death and disease but as bearers of vivifying complexity. It is the metaphysically governed, and politically expedient, model of the self-contained organism adequating to Platonic perfection that has prevented this from becoming clear for quite so long). The epistemic leap required to begin to understand the long observed but numinous natural patterns now associated with

complexity, was an acceptance of Bataille's intuition, elaborated into a revolutionary attempt to explain the "*general* problems that are linked to the movement of energy on the globe" (Bataille I 27/20). Prigogine had discovered that the flows of matter and energy that pass through certain physicochemical systems and "keep them far from equilibrium can nourish phenomena of spontaneous self-organisation, ruptures of symmetry, evolutions toward a growing complexity and diversity" (Stengers 1997c 38). Here is how Prigogine, in words written with his collaborator Isabelle Stengers, summed up the contribution made by his elaboration of dissipative structures to the philosophy and science of matter:

> In far-from-equilibrium conditions we may have transformations from disorder, from thermal chaos, into order. New dynamic states of matter may originate, states that reflect the interaction of a given system with its surroundings. We have called these new structures *dissipative structures* to emphasise the constructive role of dissipative processes in their formation. (Prigogine and Stengers 1984 12)

Prigogine's achievement, then, is the reintroduction into physics, of time, and more specifically, the defence of the essentially Bergsonian thesis of a multiplicity of lived durations, "a radical multiplicity of time" (Deleuze 1991 78)[8]. It is the introduction of a synthesis capable of coherently holding together different rhythms of time, both reversible and irreversible. The recognition of the "irreversible time of evolutions

toward equilibrium, the rhythmic time of structures whose pulse is nourished by the world they are part of, the bifurcating time of evolutions generated by instability [...] and even microscopic time" (Stengers 1997c 41). This is not far enough, to stop here would be a simpleminded pluralism; we have to go further with Deleuze and Guattari to make "PLURALISM = MONISM" (Deleuze and Guattari 1980/87 31/20); this formula is the key used by DeleuzeGuattari to dissolve the "entirely necessary enemy" that dominates theology, as well as metaphysical and transcendental philosophies alike: Manichaean dualism (Deleuze and Guattari 1980/87 23/14). It is the guide in the attempt to surmount the irrevocable split in the world posited by dualism that motivates *all* of their philosophy, and it is variants of this formula that are found throughout the bastard line of philosophy with which they identify themselves: from Bruno's *complicatio*, the holding together of the one and the multiple; to Bruno and Spinoza's modal differentiation of one matter, given in Spinoza's definition of a body and Bruno's "mutation is not striving for another being, but for another mode of being" (Bruno 1998 89); to intensive difference. Finally, this formula is opened out such that "repetition in the eternal return [...] consists in conceiving the same on the basis of the different" (Deleuze 1968/94 60/41). Here, this unity of multiplicity and unity is aimed at time, such that the plurality of times, posited above, is only possible, "*livable or lived in the perspective of a single time*" (Deleuze 1991 81), they are folds in a single time, local spirals in a river, demonstrations of the truth of the relative, not of a relativity of truth, but a truth of the relative (See Deleuze 1993 20, 1985/89 191/147 and Deleuze and Guattari 1991/94 55/54, 123/130; and the

expansion of this issue in chapter six below). Perhaps the best exposition of this phenomenally complex attempt to hold together the times of difference and of repetition, of increasing complexity, and of irreversibility is Massumi's: "there are many time lines, as many as there are universes that will have been, even more, as many as the phenomena that will have been born and died in those worlds [...] this amounts to a scientifically derived version of Nietzsche's theory of the eternal return of difference" (Massumi 1992 168).

Entropic Multiplicity

The death drive, in a sense is already plasticised, already deterritorialised, transversal. It can be classified according to Guattari's schema proposed in his 'Machinic Propositions' as belonging to the first of the 'Flux Propositions', that is as a 'Positive Deterritorialisation', one of those "basic component[s] of propositions of intensive flux (line of escape and line of abolition)" (Guattari 1977 357), it introduces a thought of entropy which moves, Deleuze suggests, beyond the philosophical economy of truth and judgement and towards one of sense and the event; it is "*not merely one instinct among others*, but the crack itself around which all of the instincts congregate" (Deleuze 1969/90 431/326). The history of the entropy law in its various disciplinary deployments displays characteristics embodied in Guattari's critical distinction, it is "not a surplus value of encoding but a *trans-encoding*" (Guattari 1977 333), that is to say, it is transversal. It is "a component that has taken upon itself the specialised vector of deterritorialisation. In effect, what holds an assemblage together is not

the play of framing forms or linear causalities but, actually or potentially, its most deterritorialised component, a cutting edge of deterritorialisation" (Deleuze and Guattari 1980/87 415/336). When engaging with the death drive, with the multiple disciplinary structures and thought-events in which it is implicated, and with the multiple series in which it is engaged in Deleuze and Guattari's thought, we will have to be attentive to the writing procedures by which they operate. By this, an evolutionary drawing of the passage of the death drive through a series of texts made from an external position of judgement will be rendered impossible, rather we will have to diagram the lines along which this particular rhizomic structure operates "in the heterogeneous [by] jumping from one already differentiated line to another" (Deleuze and Guattari 1980/87 17/10). The method must always be immanent, that is to say that the operation of DeleuzoGuattarian critique militates against transcendence by a process of self-organisation (intensive production at base level).

Against Manichaean Dualisms

Subordinate, and adjacent, to this recasting of the death drive is the recognition, all too often overlooked in the secondary literature, that apart from the "analytic imperialism of Oedipus" (Deleuze and Guattari 1974/83 30/23), the major attractor of DeleuzeGuattari's animus in the Freudian corpus is the maintenance of dualism. Indeed, 'The First Positive Task of Schizoanalysis' (Deleuze and Guattari 1974/83 385-406/322-39) is almost entirely taken up by a critique of Freudian dualism, and the proposal of a materialist psychiatry based on a

philosophy of machinic intensity, the discovery of a "new energetic conversion [...] the third kind of synthesis, the synthesis of conjunction" (Deleuze and Guattari 1974/83 395/330). In accord with Karl Krauss' notion that "psychoanalysis is that illness of which it believes itself to be the cure", the argument of *Anti-Oedipus* is that Oedipalisation is indeed an incurable disease and one only propagated by its supposed cure. That is to say from a certain, dominant, way of understanding Freudian thought, a path that is unavowedly semiological, welded as it is onto the foundations of the primordiality of the linguistic signifier, and the machinations of the phenomenologically inspired discourse of presence. Guattari economically summarises the evolution of Freudianism as being from "the seething richness and disquieting atheism of its origins" to a structuralism "recentred on the analysis of the self, its adaptation to society, and its conformity with a signifying order" (Guattari 1995 10), its reterritorialisation into an overcoding system operated by a priesthood. This recentring is one that in DeleuzeGuattari's words demonstrates the symptoms of "signifiance and interpretosis" the "two diseases of the earth or the skin, in other words, humankind's fundamental neurosis" (Deleuze and Guattari 1980/87 144/114). Even if Oedipus is a dead end there is still much to be gained in removing dualism from the Viennese body, it is this task that DeleuzeGuattari set about in a way that is assiduous, radical and singular. How is this operation to be effected? Deleuze argues that Freud can be taken beyond crippling dualism: by suggesting that underlying qualitative difference is a "difference in rhythm and amplitude a difference on a time-scale" (Deleuze 1989 115). The question of dualism then is always attacked from the perspective of the

problematic of intensity, and the proposal of a concept of "ontological intensity" (Guattari 1995 29), set up by the resonances produced between a Spinozist and a Nietzschean framework, in which "if we relinquish the soul, the 'subject' in general disappears. One acquires degrees of being, one loses that which *has* being" (Nietzsche 1968 § 485). With this elimination of any adherence to the atomic subject Nietzsche reaches the point of seeing the "subject as multiplicity".

Vers la Grande Identité

As has been suggested, much of Deleuze's work, both with and without Guattari, is geared towards the derivation of a vital formula, that is "PLURALISM = MONISM" (Deleuze and Guattari 1980/87 31/20), philosophically this is mapped out within the space of the concept of intensity. The crucial early coordinates for this are the fifth chapter of *Difference and Repetition*, 'Asymmetrical Synthesis of the Sensible', in which Deleuze addresses the problem of how one might produce a transcendental principle from energy; and the second chapter of *Nietzsche and Philosophy*, 'Active and Reactive'. These two chapters are tied together by a number of threads that are central to this discussion. i) The strong identification of a subterranean line of flight between Nietzsche and Spinoza, the constitution, to which Deleuze has said all of his work in the history of philosophy leads[9] of the "great identity Nietzsche-Spinoza" (Deleuze 1988c), configured here upon the basis of the "common sun of the Spinozist *conatus* and the Nietzschean will to power" (Zaoui 1995 71) as the operative principles of a selective ontology (see Deleuze 1968/94 60/41). ii) The attempt to produce a

concept of dynamic, generative force as the basis of a philosophy of immanence. iii) An account of the role played by thermodynamics as the starting point from which Deleuze and Guattari begin their non-dialectical, non-dualist accounts of classical philosophical questions; that is to say the development of the intermeshed concepts of intensity, drive, multiplicity.

The Nietzschean critique of science is separated by Deleuze into three simultaneous levels operating, "against logical identity, against mathematical equality and against physical equilibrium" (Deleuze 1983 45). These three levels are taken by Deleuze to be unified by their opposition to the undifferentiated, he gives as an example the promise of a "death ('heat' or otherwise)" (Deleuze 1983 45 and Nietzsche 1968 § 1053—1067), that is the cosmological ground plan of nineteenth century endtime thermodynamics[10]. Indeed the thought of eternal recurrence is based, albeit complicatedly and critically as we have begun to see, upon that thermodynamics: "The law of the conservation of energy demands *eternal recurrence*". That Nietzsche should wed, albeit problematically, a critical element of his thought, to an understanding of physical law should make us think twice before subsuming him to a phenomenological tradition that has almost entirely limited itself to textual exposition, and become increasingly hostile to technoscience. But more importantly it should draw our attention to the limits of Nietzsche's own science, for on this point, Nietzsche is not abstract enough, in the sense in which Deleuze and Guattari praise Spinoza. That is for inventing "elements that have neither form nor function, that are abstract in this sense even though

they are perfectly real [...] distinguished solely by movement and rest, slowness and speed" (Deleuze and Guattari 1980/87 310/253).

Nietzsche's thought of the eternal recurrence, one of the most important and complex elements of his thought, is inextricably bound up with thermodynamics. One of the most striking things about this is his attempt to launch, what turns out to be, an astonishingly prescient critique of the thermodynamics of his day, then committed to a thought of the universe culminating in a heat death, a cosmological, apparently nontheological, day of judgement, the physical levelling of differences. Nietzsche insists on numerous occasion in his work, principally in *The Will to Power*, that "we deny end goals: if existence had one it would have been reached" (Nietzsche 1968 § 55), as such Nietzsche's critique is also the start of an exposure of the transcendental illusion of entropy and of an account of the world in terms of becoming. The problem of abstraction here lies in the fact that Nietzsche's justification for this position lies in his rejection of the possibility of there being an infinite reservoir of novelty upon which the world may draw, an idea that he describes as "unforgivably insane". That Nietzsche should be led to this conclusion leads us to the limit of his thinking, or rather to the materialist limit of the possibilities for his thinking, for as Lee Smolin, one of the most eminent contemporary cosmologists, has put it "Nietzsche was right to worry about the impossibility of novelty, because on the physics of his time it was indeed impossible to imagine how it might occur" (Smolin 1997 298)[11]. If on this point Nietzsche remains somewhat constrained by a mechanistic materialism, in other areas of his thought he goes far beyond this, principally in his adoption

of a force-point-world, or a dynamic relational view of matter deriving from the Dalmatian physicist Ruggiero Boscovich[12]. As an example of an advocate of such an unmitigated mechanism that presupposes a final state, Nietzsche refers to William Thomson (later Lord Kelvin, the author in 1852 of the first formulation of the second law of thermodynamics). Thomson's claim here lies in the introduction, in the second law, of the idea that there is a *universal tendency* operative in the cosmos toward the degradation of mechanical energy. In a somewhat complicated formulation of the impossibility of the world becoming "rigid, dry, dead, *nothing*" of its reaching "a state of equilibrium" Nietzsche writes: "If, eg., the mechanist theory cannot avoid the consequence, drawn for it by William Thomson, of leading to a final state, then the mechanist theory stands refuted" (Nietzsche 1968 1066). Nietzsche's formulation of eternal return, then, offers a glimpse of a critique of mechanism in what is, as we have seen, a Schellingian fashion, followed by a magnificent vision of an infinite universe as a "monster of energy, without beginning or end [...] as a play of forces and waves of forces, at the same time one and many [...] a sea of forces flowing and rushing together, eternally changing, eternally flooding back" (Nietzsche 1968 § 1067). Nietzsche's account, when written, at the end of the nineteenth century, was moving in a direction diametrically opposed to the scientific consensus, it was utterly *untimely*. Yet it is a vision that has enormous correspondences with the possibilities opened up by developments since the nonlinear transformation of thermodynamics, the complexity of the late twentieth century. It demonstrates, more convincingly perhaps than any other element of his thought, that Nietzsche "possessed an acute

untimeliness in his instincts concerning the future direction of the sciences" (Whitlock 1996 220). Nietzsche's own description of the philosopher in his 'Schopenhauer as Educator' is fully applicable here: "Nature propels the philosopher into mankind like an arrow; it takes no aim but hopes the arrow will stick somewhere. But countless times it misses and is depressed at the fact" (Nietzsche 1983 177).

Preindividual Singularity

The point of mapping out Nietzsche's engagement with thermodynamics, and principally its second law, goes beyond fidelity to historical scholarship, and beyond an assessment of the formal adequation of Nietzsche's position to the contemporary (his *or* our) status of thermodynamics from the position of scientific objectivity; the status of the second law is anything but settled, thermodynamics as a discipline and as a set of metaphorics is almost by definition far from equilibrium[18]. What must be attended to here is the introduction of a change in the possibilities of conceptualisation opened up by the radicalisation of energetic and tendential categories, and the necessity of mapping them onto representational problems. I want to do this by looking in some detail at Deleuze's account of preindividual and impersonal singularities, and at the connection between this account and first, the importance to Deleuze's philosophy of an energetics, and second, of an account of Freud's death drive. In an immensely intricate passage of *The Logic of Sense* Deleuze recognised that the "problem of entropy" is crucial to his work precisely because it concentrates the question of singularity in a remarkably transversal fashion

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> The question whether the world itself has a surface capable of forming again a potential of singularities is generally resolved in the negative. A world may be infinite in an order of convergence and nevertheless may have a finite energy, in which case this order would be limited. We recognise here the problem of entropy, for it is in the same way that a singularity is extended over a line of ordinary points and that a potential energy is actualised and falls to its lowest level (Deleuze 1969/90 145/110)

This is the conclusion to Deleuze's principal attempt to reconstruct a transcendental field, constituted by "impersonal and preindividual nomadic singularities" (Deleuze 1969/90 145/109), an account, that must be explicated here, as its implications will reverberate throughout this thesis. Deleuze's location of singularities as a conceptual core of his philosophy of energetic materiality is an attempt to guarantee its being founded on two principles: immanence, and intensity. This whole account is predicated upon an energetic basis, for the critical problem with transcendental philosophy in its Kantian form as identified by Deleuze lies in its strictly metaphysical dependence upon an illegitimate choice between "*either* an undifferentiated ground, a groundlessness, formless nonbeing, or an abyss without differences and without properties, *or* a supremely individuated Being and an intensely impersonalised Form" (Deleuze 1969/90 141/106). In other words Kantian transcendental philosophy remains theological: in that it is strictly incapable of offering a coherent account of genesis or

individuation, and incapable of thinking matter without imposing upon it a whole series of dictats which are imposed on it from the outside (eg Spirit, the subject, Platonic form, species, Kantian categories, all forms of what DeleuzeGuattari condemn as the strata or "the judgements of god"), all the generalities to which a thought of singularity is opposed. As such, we can see the great stakes, political and philosophical, involved in the maintenance, in transcendental thought of the hylomorphic schema, and correspondingly of the critique of that hylomorphism, and the active advocacy of a hylozoism, a philosophy ascribing immanent power to matter, in heretical thought. A heretical materialism represented here principally, by the work of Deleuze and Guattari, and drawing substantially upon Gilbert Simondon's philosophy[14]. Kant is conventionally seen as transcending and unifying competing strands in philosophy (represented in Kant's own account principally by Rousseau and Hume), but as we will have cause to repeat on a number of occasions in this thesis, this was achieved on the basis of a hegemonised hostility to Spinozism, and the silencing of Spinozist questions. This silencing, though, was not entirely homogeneous and contained substantial cracks: their dominant names being Schelling, Marx, Nietzsche. Regardless of the massive differences between these figures, it is their common attempt to think the Spinozist prioritisation of the body, of materiality that is of concern here. Schelling for example, in what has judiciously been called "one of the seminal works of materialism" (Zizek 1996 7), the remarkable drafts of his projected *Weltalter*, notes that things "stand before us as an incomprehensible whole until we find traces of its manner of growth and gradual development [...] before we learn about the distinctive

circumstances in which the individual developed and formed" (Schelling 1997 121), it is as a development of this Schellingian theme that Simondon's account of individuation is presented in the next chapter. This is part of Schelling's doctrine (vital for DeleuzeGuattari) of a *germinal life*, which is precisely one of those 'extraordinary moments', of which Deleuze speaks, in which "philosophy makes the Abyss (*Sans-fond*) speak and finds the mystical language of its wrath, its formlessness and its blindness" (Deleuze 1969/90 142/106). However, Deleuze explains, to make the formless speak is not sufficient to escape the alternative of transcendental philosophy and metaphysics; the move beyond this choice, lies in the exploration of "a world of impersonal and preindividual singularities" (Deleuze 1969/90 142/107). Deleuze credits Nietzsche with this discovery, and for renaming this world "the will to power, a free and unbound energy", populated by "nomadic singularities which are no longer imprisoned within the fixed individuality of the infinite Being (the notorious immutability of God), nor inside the sedentary boundaries of the finite subject (the notorious limits of knowledge)" (Deleuze 1969/90 142/107). In this world, Deleuze's world of intensities, singularities, multiplicities, and the constitutive relations between series, "[c]rowned anarchies are substituted for the hierarchies of representation; nomadic distributions for the sedentary distributions of representation." (Deleuze 1968/94 356/278).

Entropic Philosophy/Philosophical Entropy

The conceptual issues involved here revolve around the possibilities of

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there being a philosophical account of entropy in its current manifestation, nonlinear and statistical, and as a map at the edge of chaos[15]. Critical here is a reworking of the three elements of desiring-machines (assemblages) in Deleuze and Guattari's *Anti-Oedipus* (Deleuze and Guattari 1974/83 404/338) in terms of parts: working, mobile motor, adjacent; forms of energy: Libido, Numen, Voluptas; and finally its three operative syntheses: connective syntheses of partial objects and flows; disjunctive syntheses of singularities and chains; conjunctive syntheses of intensities and becomings. These positions definitively mark DeleuzeGuattari's work off from the rest of their philosophical milieu— the uncomfortable settlement between Derridean deconstruction and a defanged Frankfurt style critical thinking that so dominates contemporary philosophy— in a way that corresponds with Negri's felicitous designation of Spinoza as the *savage anomaly*. As we have already seen this breach corresponds to the unprecedented hostility to Spinozism ushered in by the Kantian reformulation of philosophy, as such we are able to reconstitute the moves that allow DeleuzeGuattari to claim that with them

> Philosophy is no longer synthetic judgement; it is like a thought synthesiser functioning to make thought travel, make it mobile, make it a force of the Cosmos (Deleuze and Guattari 1980/87 424/343)

The point of this statement and the reason for its being referred to here is that it captures the effort made to "unite disparate elements in the material, and transpose the parameters from one formula to

another" (ibid.), this is a path not lacking in dangers, as Deleuze and Guattari stress, for one might "overdo it, put too much in". It is a philosophy no longer subject to the tyranny of the true, one that has renounced "a logic of predication and truth" in favour of a "*logic of sense* and the event" (Deleuze 1969/90 151/111, emphasis added). The seismic importance of this move can hardly be exaggerated because it allows for a positive assimilation of modern information theory, that is the negentropy principle of information (Brillouin)[16] a model that is fundamentally energetic and so materialist, squabblings over ontology are reconfigured as quantitative differentiations from zero, as such one is able to derive a thermodynamic principle for the selection of problems (Prigogine and Stengers 1988 285), for the pursuit of signs-particles, and for the substitution of sense and affect for meaning. It is non-coincidental, and non-trivial, that one is able to draw some of DeleuzeGuattari's concepts into, and of course from, energetics and not least of all because there is a complex network of personal associations, and a two way intellectual relationship between their own thought and that of one of the pioneers in the field of nonlinear thermodynamics, Ilya Prigogine whose work we have already encountered. With, Stengers, his sometime philosophical collaborator, Prigogine has echoed a theme from Deleuze and Guattari that is critical with regard to the current discussion

> Matter is not given. In the present day view it has to be constructed out of a more fundamental concept in terms of quantum fields. In this construction of matter, thermodynamic concepts (irreversibility, entropy) have a

role to play (Prigogine and Stengers 1984 288)[17]

Elsewhere Prigogine has noted the indissoluble relationship between the condition of being-far-from-equilibrium, and the immanent creativity of matter, "matter acquires new properties when far from equilibrium in that fluctuations and instabilities are now the norm. Matter becomes more 'active' [...] matter far from equilibrium acquires new properties" (Prigogine 1997 65-7)[18].

The question of the link between energy and death in DeleuzeGuattari can now be restated: death they argue

> is part of the desiring machine, a part that must itself be judged, evaluated in the functioning of the machine and the system of its energetic conversions and not as an abstract principle (Deleuze and Guattari 1974/83 397/332)

What happens here is an attempt to extract from a Freudianism that has become frozen into a dualist molar overcoding system par excellence (all is reduced to Oedipus, or to lack, or to what ever master code the particular analyst chooses), an immanent function. What became the manipulation of a "transcendent death instinct as a principle" (Deleuze and Guattari 1974/83 398/333), is reinserted into a conjunction with a Spinozist uncoupling of philosophy from what Deleuze calls *the system of judgement*. In 'Beyond the Pleasure Principle', the Death Drive is, for Freud, ineluctably bound up with the energetics then available to him, specifically that of Helmholtz, it

expresses an irreversible tendency for entities to return to inorganic matter. The relationship between forms of matter (modes of substance in a Spinozist vocabulary), the routes between them and immanence, is a deep theme in their work. But note that "immanence is not said *to* substance, but substance and its modes are in immanence" (Deleuze 1995 4)— immanence is never *to* something, to suggest this is to smuggle transcendence back in under cover of this 'something' (see Deleuze and Guattari 1990/94 46/44), an analogous formula will be applied later to a Bergsonian understanding of consciousness (ie. consciousness is always said *of* something, we do not make a transcendental principle of consciousness *per se*). In *A Thousand Plateaus* they write:

> it is, in effect, a distinction between matter and life, or rather, since there is only one matter, between two states, two tendencies of atomic matter [...] Stating the distinction in the most general way, we could say that it is between stratified systems or systems of stratification on the one hand, and consistent,self-consistent aggregates on the other. But the point is that consistency, far from being restricted to complex life forms, fully pertains to the most elementary atoms and particles (Deleuze and Guattari 1980/87 413/335)

It is most important to understand that this thinking of life-death, life-matter does not just concern these particulars, but is said of philosophy itself, and of everything that comes within the purview of

DeleuzeGuattari's thought. This adherence to a thought of an intensive continuum derives from the critique of hylomorphism that will be elaborated in the next chapter, and is the illustration of the core position that the thinking of matter has to DeleuzeGuattari's thought. As Deleuze claims in a lecture on music:

> In every domain we are done believing in a hierarchy that would go from the simple to the complex, according to the matter-life-mind scale. It could be on the contrary that matter is more complex than life, and that life is a simplification of matter. It could be that vital rhythms and durations are not organised and measured by a spiritual [spirituelle] form but take their articulation from the outside, from molecular processes that traverse them. In philosophy as well we have abandoned the traditional coupling of an undifferentiated thinkable matter with categorical forms of thought or grand concepts. We are trying to work with carefully elaborated thought materials to render thinkable those forces that are not thinkable by themselves [...] In philosophy it's no longer a matter of an absolute thought such as classical philosophy wanted to embody, but rather an impossible thought, that is to say the elaboration of a material that renders thinkable those forces that are not thinkable by themselves. (Deleuze 1978)

To recapitulate and repeat the principal point of this chapter: entropic tendential analysis is not metaphorical, it is directly allied to the

onslaught made by DeleuzeGuattari upon the prioritisation of quantitative difference in every variant of metaphysical or signifying regime. The drives (Eros and Thanatos) belong, for Deleuze and Guattari to the realm of physics, that is, to recall 'The Molecular Unconscious', "the body without organs and its intensities are not metaphors, but matter itself" (Deleuze and Guattari 1974/83 336/283). The figure of entropy is not considered here to be merely a trope (as Martin Rosenberg suggests in his paper on the subject), nor a metaphor, it is an essential marker on the plane of consistency, and finally thermodynamics, of whatever variety, is not given the status of a top down royal discourse, nor is its teleological interpretation accepted, rather it is taken to be a fundamental element in constructing what DeleuzeGuattari posit as a transformative diagram. Entropy is sedimented into at least seven different regimes: classical linear, and nonlinear thermodynamics, information theory, molecular biology, Neo-Darwinism, economics[19], non Oedipal Freudianism[20], and as such is a prime coordinate for the creation of transversal connections, it acts as a vector of potential deterritorialisation in each of these disciplines. I concur here with Isabelle Stengers who has perfectly captured this sense of the peculiarly powerful position occupied by thermodynamics by suggesting that it offers an exemplary opportunity for "modifying the scope of concepts, of shifting problems into a new landscape, of introducing questions that drastically change the nature of disciplines" (Stengers 1997c 36), it is precisely this modifying, shifting, questioning, activity, this, irrepressible *inventing* that characterises the philosophy that is argued for here[21]. As such entropic profiles are necessarily configured as

the horizon of DeleuzoGuattarian problems; problems that are simply not amenable to the preformed logical orders, and overcoding procedures characteristic of stat/e/ic thought. These questions lead us towards the nomos...

Entropic Tendencies: Nomological Processes

chapter ii

Following Matter, Tracking Haecceity (singularity/membranes), Transduction, Metastability

In their book on Franz Kafka DeleuzeGuattari note that

> as long as the form and the deformation or expression are not considered for themselves, there can be no real way out, even at the level of contents. Only expression gives us the *method* (Deleuze and Guattari 1975/86 29/16)

This proposition in the text that appears between the twin volumes of *Capitalism and Schizophrenia* serves as an indicator of the centrality of the *logic of expression*, a logic that Deleuze has understood since his earliest work as underpinning Spinoza's monism, to their exposition of a philosophy of matter. The formation of a philosophy of matter deriving from the work of DeleuzeGuattari is forged substantially out of an examination of the consequences of their engagement with Gilbert Simondon[22]. The nexus of problems encountered here can be simply cited under the rubric of the linked critiques of hylomorphic models in philosophy and science and their respective approaches to concept formation. Hence the focus of this chapter will be a pursuit of the specificity of the attack launched by DeleuzeGuattari on the "classic image of thought" (Deleuze 1968/94), upon hitherto existent ways of asking philosophical questions, of selecting philosophical problems. It is in this particular sense that one must locate the DeleuzoGuattarian enterprise as a challenge to philosophy, as the attempt to make philosophy immanent, not just a discipline that manipulates the concept 'immanence' but one that maintains this as practice. This then is a response to Deleuze's summary definition of philosophy in

Dialogues as "la théorie des multiplicités" (Deleuze and Parnet 1996 179), and an attempt to learn how to become a "keeper of multiplicities" (Serres 1995 24). The relationship between immanence and multiplicity is given by Deleuze and Guattari by the above suggestion that expression provides us with a method. How so? As we have already seen, the question of multiplicity is always posed, by Schelling, by Bergson, and by Deleuze and Guattari, as a means of finding a philosophical rejection of the absolutism of dialectics or of dualism (they play the same ordering role in philosophy), the response to dualism is not to posit the one, but the multiple, and "to attain the multiple, one must have a method that effectively constructs it" (Deleuze and Guattari 1980/87 33/33). That method is expression or immanence, and "immanence is revealed as expressive, and expression as immanent" (Deleuze 1968/92 159/175). The multiple, a multiplicity, a symbiotic becoming is understood as a means of holding together the heterogeneous, it is the task of philosophy to understand such heterogeneities, such that the "preformed logical order" (Deleuze and Guattari 1980/87 307/251) of transcendental philosophy will be actively militated against; instead the consistency of an assemblage, a multiplicity, the 'holding together' of the heterogeneous, can only be understood "case to case" according to immanent criteria. In the context of the present chapter, we must note here that this concept of consistency and its relationship to that of immanent function (developed in chapter one) is, like much else in Deleuze and Guattari, derived from Simondon who argues that "the relation to the milieu cannot be envisaged, either before or during individuation, as relation to a unique and homogeneous milieu. The milieu is itself a *system*, a

synthetic grouping of two or more levels of reality, between which there was no 'intercommunication' prior to individuation" (Simondon 1995 28n6) As such Deleuze and Guattari's philosophy is guided by the principle that Deleuze sees as informing Foucault's work: "that every form is a compound of relations between forces. Given these forces, our first question is with what forces from the outside they enter into a relation, and then what form is created as a result" (Deleuze 1988a 124).

Why Simondon?

Gilbert Simondon's unique career was dedicated to thinking individuation, and to drawing attention to the extreme degree to which both philosophy and science are subject to the pernicious influence of the hylomorphic schema: the matter-form model that "assumes a fixed form and a matter deemed homogeneous" (Deleuze and Guattari 1980/87 508/408). Simondon's thought is distinguished amongst the myriad resources drawn upon by DeleuzeGuattari for several reasons, each far more conceptually significant than the pedagogic task of tracing 'influences', or of reducing DeleuzeGuattari's work to a stage in philosophical history. Simondon's work is singular in that amongst the 'great' names of philosophy whose work Deleuze claims to infest in his account of his own philosophical formation, it is not substantially reconstructed, but its conceptual invention is directly utilised as a critical component in the diagramming of concrete assemblages. Second, substantial sections of his work, rather than being adapted for use in novel problems are used for the purposes for which they were

designed. Third, Simondon operates as the key conceptual resource for one of the most striking and distinctive, yet understudied, elements of DeleuzeGuattari's philosophy; that is their obscured yet trenchant critique of, involvement with, and recognition of, the great importance of, cybernetics in its most stratified form. This critique is posed in DeleuzeGuattari's attempt to think the meaning of the shift of man's dominant relationship with the forces of the outside (see the books on Kafka and on Foucault) from carbon to silicon. For Deleuze this means an attempt to think the *superfold* by which "the forces within man enter into a relation with forces from the outside, those of silicon superseding those of carbon" (Deleuze 1988a 131). In fact Simondon's critique, simultaneous with the development of second-order cybernetics (in which the observer is taken to be an intrinsic component of any adequate description of a system), is decisive for that of what we might call third order cybernetics[23], its current generalised applications in the cultural sphere. This new phase of cybernetics, arguably inaugurated by the libidinal materialism of the 1970's and precursed by Bataille's general economics, is perhaps one of the most significant features of the Mechanosphere in the late twentieth century. As such, one might venture to say that any philosophy that doesn't attempt to make a response to cybernetics is almost by definition going to be politically and culturally irrelevant. Of those philosophies that do engage with cybernetics, they either reject the 'science of control and communication in the animal and machine' in the name of some kind of defence of what is proper to the human, a technophobia of distinctly Heid[illegible] inspiration; or else on the other hand offer an equally anthropocentric and mindless celebration of all

things cyber that imagines that the coming of the computer is the first time that man has come into contact with a prosthetic. DeleuzeGuattari and the biologists of symbiosis show to the contrary that life has always been a question of a coeval relationship between the bios and technics to the extent that a separation of these terms is almost meaningless, and can only be made on the basis of an arbitrary anthropocentrism. As one of Deleuze and Guattari's great heroes, Samuel Butler, wrote in his astonishingly prescient novel *Erewhon* (1872) "Where does consciousness begin, and where end? Who can draw the line? Who can draw any line? Is not everything interwoven with anything? Is not machinery linked with animal life in an infinite variety of ways?" (Butler 1965)[24]. One of Deleuze's teachers, the historian and philosopher of science, Georges Canguilhem merely updates Butler when he writes that one must "consider technology as a universal biological phenomenon and no longer simply as an intellectual operation to be carried out by man" (Canguilhem 1992 64). Furthering this lineage DeleuzeGuattari declare: "There is no biosphere or noosphere, but everywhere the same Mechanosphere" (Deleuze and Guattari 1980/87 89/69). Fourth, Simondon, by lodging his work so concretely within a problem, that of individuation, is able to performatively demonstrate the immanent efficacy of his critique to so central a philosophical complex as that of hylomorphism. Fifth, it is by pursuing the limitations and edges of Simondon's work that one is put into contact with the serious challenge posed by DeleuzeGuattari's achievement to other schools of philosophical research.

Finally, and as if in illustration of the above, we can consider Deleuze's

own account of the importance of Simondon to his thought given in a note to *Logic of Sense* (Deleuze 1969/90 136n. 1/344n. 3). Deleuze credits Simondon with inspiring perhaps his most important and radical philosophical legacy, that of the creation of a new, non-Kantian and non-phenomenological, basis for the transcendental field, "the idea of singularities, and thus of anti-generalities [...] must now serve as our hypothesis for the determination of this domain [the transcendental, EA] and its genetic power" (Deleuze 1969/90 122/98). Deleuze writes that the five characteristics of this transcendental field, composed of impersonal and pre-individual singularities, are all given in Simondon's *L'individu et sa genèse physico-biologique* and that the only difference between the two writers lies in their conclusions. Just to ensure that the importance of this is not missed. I reiterate that what is being proposed here, amounts to a radical break with both the phenomenological and analytic traditions, in so far as both are committed, albeit in different ways, to a philosophy of subject-object, to a transcendental field populated by such unities, and to the parallel of the transcendental and the empirical (as found in Husserl and Derrida). Taking this as the basis of his philosophy marks Deleuze's, and DeleuzeGuattari's, very serious challenge to the philosophical alternatives. The four characteristics of this new transcendental field are given as:

1. internal resonance of series
2. topological surface of membranes
3. organisation of sense
4. status of the problematic (Deleuze 1969/90 136n.

1/344n. 3)

Simondon and the Critique of Cybernetics: le Devenir sans Fin

In the same way that Deleuze and Guattari describe Spinoza's *Ethics* as the great book of the BwO, I would like to describe Vladimir Vernadsky's *The Biosphere* as the great book of the *geology of morals*, of more specifically, the plane of consistency. For Vernadsky went further than anyone in the direction of the cosmic monism elaborated in the account of the abolition of all distinctions. It is Vernadsky who first attempted an answer to the question "Who does the Earth think it is?". *The Biosphere* offers an extended account of the "relationship between the development of life on earth and the formation of the biosphere—the envelope of life where the planet meets the cosmic milieu" (Vernadsky 1998 39), which demonstrates how the "plane of consistency knows nothing of differences in level, orders of magnitude, or distances. It knows nothing of the difference between the natural and the artificial. It knows nothing of the distinction between contents and expressions, or that between forms and formed substances" (Deleuze and Guattari 1980/87 89/69).

Following Simondon explicitly, and I hope to show Vernadsky indirectly, Deleuze and Guattari have gone some way towards constructing a set of concepts that together form a highly original and extremely powerful critique of the problems that riddle Wienerian canonical cybernetics and the autopoietic orthodoxy that (in certain domains) passes for its successor. Whilst Deleuze and Guattari rarely address these questions

Following Matter, Tracking Haecceity

directly, an exception being perhaps Guattari's brief discussion of autopoiesis in his *Chaosmosis*, one can argue on the contrary that the idea that underpins everything that we are about to discuss, that of the concept of system and in particular the difference between open and closed systems, is all that they have ever written about. In a discussion of *A Thousand Plateaus*, Deleuze makes it clear that he considers the guiding idea of that book, the rhizome, to be "precisely one example of an *open system*" and goes on in the same work to discuss the concept of the "open totality" (Deleuze 1990/95 43/32).

Autopoiesis is a term and a body of theory developed by Humberto Maturana and Francisco Varela in the 1970's as an attempt to characterise the 'organisation of the living'. The term is self-explanatory when returned to its Greek components: *auto* (self) *poiesis* (creation/production). As such it characterises the living as that which replicates itself. As Maturana put it, the construct of autopoiesis: "resulted from the direct attempt [...] to provide a complete characterisation of the organisation that makes living systems self-contained autonomous unities, and that makes explicit the relations among their components which must remain invariant under a continuous structural transformation and material turnover." (Maturana 1980 45).

The systems theorist George Kampis, one of the few to seriously and sympathetically engage with Bergson, has an assessment of autopoiesis with which I fully agree, he writes that the "music of autopoiesis harmonises with our own efforts [...] however the details

and implications of Maturana and Varela's and our developments differ considerably. The words that describe what an autopoietic system looks like could be our words; this is not true for the logic behind [sic] and for some of the conclusions" (Kampis 1991 387). As such, Kampis expresses my own reservations about autopoietic theory. Maturana and Varela seem to be inspired by laudable intentions, and their theory appears to be consonant with the positions expressed here. They insist for example, that their approach is a materialist one in that "no forces or principles will be adduced which are not found in the physical universe". Similarly, the potentially nonessentialist approach given in the statement that "our problem is the living organisation and therefore our interest will not be in properties of components, but in processes and relations between processes realised through components" (Maturana and Varela 1980 75) *seems* promising at least from the perspective of the relational, machinic materialism argued for here. In spite of this apparently machinic character of autopoiesis, the first quote from Maturana reveals the fundamental problem with their approach, and it lies in the deployment of the term 'autonomy'. For autopoiesis, as the rest of this section will show, is organised at its deepest level around a fundamentally reactionary, metaphysical, and molar understanding of what it is that characterises an entity (the molar-molecular distinction in DeleuzeGuattari is not a question of scale, but one of the nature of the organisation of the entity concerned). It is this metaphysical prejudice that leads Isabelle Stengers, in one of the volumes of her remarkable seven volume series, *Cosmopolitiques*, to deliver a judicious judgement on autopoiesis when she writes that one must be *suspicious* [il faut se mefier] of Maturana and Varela's attempt

to "found a general epistemology of the living on the basis of the concept of autopoiesis" (Stengers 1997b 123) and that autopoiesis simply "does not explain the living".

Maturana and Varela rely upon an ill conceived understanding of the nature of both the organism and of the machine; an understanding that when pushed, reveals itself to be thoroughly metaphysical, relying upon eighteenth century physicalist models of both terms, and is as a consequence, utterly incapable of conceptualising both individuation and the machinic thinking in terms of assemblages and becoming that this latter initiates in DeleuzeGuattari. The metaphysical prejudice that, I have suggested, pervades autopoiesis is revealed by an investigation of the starting point, and perhaps the most important point, of Simondon's extensive critique of hylomorphism.

Simondon starts out from a fundamental critique of all philosophies that remain attached to a transcendent principle, on the basis that, in varying forms they all rely upon the ontological presupposition that the concept of an individual is a meaningful one, they claim, in Simondon's words, "that it is the individual as already constituted individual that is the reality of interest, the reality to be explained" (Simondon 1995 21). Kant, for example, insists that "one must make one's beginning something that human reason is utterly incapable of deriving from any previous natural causes [...] one must begin with man as a *fully formed adult*" (Kant 1983 49). Simondon continues by arguing that scientific work carried out on such assumptions "accords an ontological privilege to the already constituted individual" (Simondon 1995 21). For

Simondon then, the problem to be addressed is that of the assumption of the unified one as the starting point of any philosophy or science. In contrast to this, Simondon proposes that the starting point must be "the idea of a *principle of individuation* [...] which would provide a sufficient explanation of how the individual had come to be an individual and account for its singularity (haecceity)" (Simondon 1995 21). We have already seen in chapter one that this critique was adopted by Deleuze in his positing of difference in itself. As if to provide a case in point, Maturana and Varela start out from precisely the kind of assumption that Simondon suggests must be avoided: they posit the autopoietic unity. Simondon's, and by extension DeleuzeGuattari's, critique clearly applies to autopoiesis, for it should be apparent from our brief look that autopoiesis relies upon an *a priori* division between the organism and the world, and hence renders itself impervious to the critical distinction between the *machine* and the *assemblage* pursued in *A Thousand Plateaus* (Deleuze and Guattari 1980/87 411/333). In contrast to this presumed unity, Deleuze and Guattari posit the concept of the assemblage or multiplicity. Following Bergson, Deleuze and Guattari make the multiple into a substantive, into a noun: a multiplicity, and in this way sever all connection with the one. "An assemblage is precisely this increase in the dimensions of a multiplicity that necessarily changes in nature as it expands its connections" (Deleuze and Guattari 1980/87 15/8). An assemblage then is always open to, in fact constituted by the outside, whilst the paranoiac nature of autopoietic theory is exposed by its terror of the outside. In autopoiesis, the concept of autonomy dictates that an autopoietic entity is destroyed by being contacted by the outside. Deleuze and

Guattari's concept of the assemblage corrodes any false security given by the assumption that the outside can be separated from the inside and vice versa.

We have already seen the acuity of Isabelle Stengers critique of autopoiesis, however she goes on to become inexplicably soft on autopoiesis, for she moves from her justified suspicion of its claims, to thinking that Guattari's modifications of autopoiesis in *Chaosmosis* are sufficient to make it workable.

In spite of the implied critique of autopoiesis that Guattari had helped to develop in the joint work with Deleuze, in his sole authored book, *Chaosmosis*, he is oddly optimistic of the possibilities for a peculiarly modified autopoiesis. What Ansell Pearson has written of Deleuze and neo-Darwinism, seems especially apposite here of Guattari, that he "does not appear to appreciate [...] that his thinking [...] presents a fundamental challenge to some of the core tenets of" (Ansell Pearson 1997 129) autopoiesis. As we shall see Guattari does not seem aware that his earlier work constituted, albeit indirectly, a devastatingly fatal critique of the autopoiesis that he here tries to save. Like Stengers, Guattari concedes that autopoiesis "lacks characteristics essential to living organisms, like the fact that they are born, die and survive through genetic phyla" (Guattari 1995 39). Given that autopoiesis only claims to explain the biological, it is mysterious as to why Guattari would want to save it given that it clearly cannot explain even that. Guattari's next move is even more inexplicable, given that he has at his disposal the superbly mobile concept of the assemblage with which to

assess the "institutions and technical machines" which he now proposes to account for on the basis of a rethought autopoiesis. Autopoiesis, he writes, "deserves to be rethought in terms of evolutionary, collective entities, which maintain diverse types of relations of alterity, rather than being closed in on themselves [...] institutions and technical machines appear to be allopoietic". This latter term is merely Maturana and Varela's for systems which "have as the product of their functioning something different from themselves" (Maturana and Varela 1980 135; Varela, 1979 15), in other words: man or indeed, animal, made machines and technologies are allopoietic, 'natural' machines are autopoietic. Guattari goes on to regress from the level of sophistication reached in *Capitalism and Schizophrenia* with the suggestion that autopoiesis be viewed "from the perspective of the ontogenesis and phylogenesis proper to a mechanosphere superposed on the biosphere" (Guattari 1992/95 62/40). In order not to be too uniformly hostile to Guattari's solo work it is worth noting that in his earlier *Cartographies schizoanalytiques*, he marks the distance between schizoanalytics and general systems theories, vis. that their utility is limited to the extent to which "their principles of intelligibility renounce all universalist pretensions and admit that they have no other mission than that of combining in a cartography of existing territories" (Guattari 1989 12).

In his article 'Du Chaos et de l'Auto-Organisation comme Néo-Conservatisme Festif'[25], Gilles Châtelet sets up what is politically and mathematically regressive in most complexity thinking, but his thought could be applied directly to autopoiesis. Contrary to most

commentary on these questions Châtelet aligns *l'enthousiasme chaotique* and *le cyber betail* ~ with the Robinsonade Right, and clearly demonstrates the collusion of much cybernetic thinking with rampant free market individualism[26]. Whilst, autopoiesis is clearly not the only attempt to adequate a revamped cybernetics to developments in a range of sciences developed since the instantiation of the cybernetic project it is important a) for its claims to provide a general model for the biological and b) for its impingement upon certain attempts to give Deleuze and Guattari's work a hard edge in these areas. In these respects Simondon's work is an essential counterfoil. On other strata it is apparent that connectionism is a more important field to grapple with, locked as it is in to the architecture of parallel distributed processing, and problems within cognitive science and artificial intelligence, the questions at stake here seem to be variants upon those attached to the critique of dynamical systems. George Kampis' summary assessment of the extremely limited utility of the autopoietic model is devastatingly simple and revolves around the observation that the problem with autopoiesis is that it "excludes external control or selection" on the basis that these are "allopoietic notions of a higher level, that would destroy the autopoiesis of the given level" (Kampis 1991 390). Ultimately, autopoiesis is on the one hand true, but only trivially so and only at the level of the basic statement embodied in its own definitional terms ie. that self-production is *a* characteristic of the living; but more perniciously its conclusions only allow for closed "self-referential, autonomous units" (Kampis ibid.), artificially insulated from the outside. Like Jakob von Uexküll, whom we shall encounter in the next chapter, Maturana starts off as a Kantian, unlike Uexküll, he

remains one, and his autopoietic units cannot be estranged from this origin.

To continue this critique from DeleuzeGuattari's position would be to argue that like classical cybernetics with its feedback loops, autopoiesis sets up closed systems as idealised entities and so forecloses upon their essential innovation of the predication of external metastable milieus and therefore singularities. Maturana himself seems to suppose that it is legitimate to take the biological entity as operationally closed to the world. From our perspective, and that of Vernadsky, Bataille, Deleuze and Margulis such a position is entirely untenable. It might be counterclaimed that Margulis herself uses the word autopoiesis, but it is clear on closer examination that she uses the term in an extremely limited fashion and that her substantial position actually goes way beyond it— and not only because Margulis' work is central to problematising the distinction between the living and the dead that Maturana assumes to be resolved by the imposition of the autopoietic scheme. The conception of 'operational closure' that Maturana and Varela attribute to a discriminable unity (see Varela 1979 54-9), such that "mechanistic (dynamic) systems [are] defined as a unity by their organisation. We shall say that autonomous systems are organisationally closed. That is, their organisation is characterised by processes such that (1) the processes are related as a network, so that they recursively depend on each other in the generation and realisation of the processes themselves, and (2) they constitute the system as a unity recognisable in the space (domain) in which the processes exist," (Varela 1979 55) must then be rejected in favour of an

understanding of *all* entities as open to the cosmos across selective semipermeable membranes, open to flows of matter and energy, subject to alien becomings. The only entity to which Maturana and Varela's definition can be applied, without making an illegitimate metaphysical assumption, is the entirety of the known universe. Nietzsche then is prescient in insisting that "it is part of the concept of the living that it must grow— that it must extend its power and consequently incorporate alien forces [...] it is all the same whether one has in view an individual or a living body, an aspiring 'society'" (Nietzsche 1968 § 728). Maturana and Varela's world is, ultimately, composed of dead, metaphysically legislated, artificially sterile, closed entities. One final point that renders autopoiesis incompatible with Deleuze and Guattari's thought is the assumption of a binary distinction between the living and the dead. As we have seen, Deleuze and Guattari posit the concept of a noncorporeal transformation to deal with precisely such a question. In his superb study of artificial life, Claus Emmeche critiques Maturana on the grounds that, for him "there is no such thing as being half-dead" (Emmeche 1994 25), and he goes on to write that "rather than being an all-or-nothing concept" as Maturana suggests, "life has continuum-like features: it is a continuum property of organisational patterns, some of which are 'more alive' than others" (Emmeche 1994 39), and for Margulis and Sagan "there is no really convincing way to point your finger and say this is where life ends and this is where the inorganic realm of nonlife begins" (Margulis and Sagan 1986 92). We have seen that autopoiesis evades the question of individuation: it also evades that of the limits of life, and of the transformation between the two, most contemporary research on

which, suggests that "the roots of life reach down into the realm of nonliving matter" (Capra 1997 94), and that it is "virtually impossible to give a concise definition of the difference between living and nonliving substance" (Margulis and Sagan 1986 72). Deleuze and Guattari suggest too that there can be no strict distinction between life and death, arguing, with Emmeche, Margulis and Sagan, and against Maturana, on the basis of a continuum, or of intensity, that "if we ask where life fits [...] we see that it undoubtedly implies a gain in consistency, in other, words, a surplus value (surplus value of *destratification*). [...] But the question is almost contradictory, because asking where life fits in amounts to treating it as a particular stratum having its own order and befitting order, having its own forms and substances [...] From this standpoint, we may oppose the consistency of assemblages to the stratification of milieus. But once again, this opposition is only relative, entirely relative" (Deleuze and Guattari 1980/87 414-5/335-7). It is to questions of intensity and individuation that we now turn.

Intensive Individuation

> transduction [...] denotes a process—be it physical, biological, mental or social— in which an activity gradually sets itself in motion, propagating within a given area, through a structuration of the area over which it operates. (Simondon 1995 31)[27]

Simondon then provides the concepts necessary for a powerful,

pragmatic critique of scientific research programmes which start out from an assumption of the one, of unity. I want to develop this by examining three key concepts that contribute to Simondon's proposal of an alternative: haecceity (thought of in terms of membrane and singularity), transduction, metastability. These three concepts are extensively worked out in Simondon with decisive results for DeleuzeGuattari, it is also worth noting that haecceity is also a term proper to the Leibnizian and Spinozist components of their work, deriving as it does from Duns Scotus, one of the key figures in the line of univocal ontology (in *Difference and Repetition*, Duns Scotus is the third name besides the more familiar ones of Spinoza and Nietzsche), it is therefore the pivot around which one brings an unexpected Spinozist thought into the set of problems generated by Simondon. It is perhaps a little surprising then that the helpful footnote on the history of the word *haecceity* does not mention Simondon, instead it reads "This is sometimes written 'ecceity', deriving the word from *ecce*, 'here is'. This is an error since Duns Scotus created the word and the concept from *haec*, 'this thing'. But it is a fruitful error because it suggests a mode of individuation that is distinct from that of a thing or a subject" (Deleuze and Guattari 1980/87 318n1/540n33), a derivation then from the author of the "greatest book of pure ontology" (Deleuze 1968/94 57/39). Nonetheless we are still dealing with Spinozist questions, for, individuation is a thought of intensity, and it is Spinoza who gives to Deleuze his concept of intensive quantity, and for whom individuation is "neither qualitative nor extrinsic, but quantitative and intrinsic, intensive" (Deleuze 1968/92 181/197). Deleuze recognises that to attribute such a position to Spinoza is difficult and heterodox, and that

Spinoza "does not appear to have had any clear solution at the outset, nor even a clear statement of the problem" (ibid. 178/197), however it is not difficult to see that an intensive theory of individuation is the only possibility entailed by modal difference and Spinozist univocity: individuations on a plane composed of one substance can only be posed as individuations of degree– matter congealed at different degrees, of whiteness, of heat, of latitude and longitude. In *Difference and Repetition* the link is made even more direct: "The essential process of intensive quantities is individuation. Intensity is individuating, and intensive quantities are individuating factors" (Deleuze 1968/94 317/246).

Hylozoic Pragmatics

We can turn now to an assessment of the pragmatic distinction elaborated in *Capitalism and Schizophrenia 2* between reproduction and following. First however, we must, to quote Éric Alliez, but to displace his comments from *What is Philosophy?* to *Capitalism and Schizophrenia 2*, elaborate how DeleuzeGuattari "sketch the programme of a physical ontology which follows on from, but at the same time surpasses the opposition between 'physicalism' and 'phenomenology', by integrating the physico-mathematical phenomenology of scientific thought to a speculative materialism founded upon a generalised dynamics" (Alliez 1993 48)[28]. Alliez' characterisation is problematic in that it seeks to return the specificity of the DeleuzoGuattarian moves back to two discredited philosophical endeavours: those of ontology and phenomenology. Any phenomenology however, any ontology, that emerges from DeleuzeGuattari's

programme would be entirely unrecognisable to those who currently practice those disciplines. Here their innovations are located as relentless rejections of the assumptions of the above principally *vis à vis* the issue of individuation. The axis for their move consists in taking the problem of the individual, the entity, whatever it might be in the case under consideration, out of its ontological founding and replacing it with the resolutely materialist set of concepts deployed by Simondon. Deleuze and Guattari follow Simondon in this move, such that the critical issues are displaced from the (post) metaphysical obsessions with Being, identity, absence and presence and switched to diagrammatisations of becoming, singularity, and assemblage. Central to Simondon's own agenda is the consignment of this former set of categories to the reservoir of redundant metaphysical baggage, the "metaphysical bog where", Bataille reminds us "it sometimes seems a serious person would only go for a good laugh" (Bataille 1988 79). "Unity and identity" Simondon writes "are useless in helping us to discover the process of individuation itself", metastability, potential energy and entropy are amongst their replacements, (Simondon 1995 24). For as Simondon goes on to argue, the terms and concepts of classical ontology are utterly incapable of comprehending individuation: they are too static, too dualistic and as a consequence "none of them can completely explain to me the simple process of becoming" (Nietzsche 1983 188)— as such new concepts must be invented. Simondon is determined on this: "we will have to use both new methods and notions" and refuse to "construct the essence of a given reality by means of a *conceptual* relation" (Simondon 1995 30). Relation rather, must be understood as constitutive, as part of the entity under

consideration, for as we shall see again in the context of the critique of DNA, ontology only perceives a diminished being "due to its having been separated out into milieu and individual. They do not refer to the whole [...] to the totality that will be formed later by the individual together with the milieu" (Simondon 1995 30). It is on the basis of this Simondonian critique of ontology that Deleuze Guattari say "What is real is the becoming itself, the block of becoming, not the supposedly fixed terms through which that which becomes passes" (Deleuze and Guattari 1980/87 291/238). This interweaving of, and mutual interdependence between, individual and environment, is taken up wholesale by Deleuze and Guattari, and comes to them via a direct line of thinking. Claude Bernard's distinction between 'milieu intérieur' and 'milieu cosmique' was taken up both by one of the early cyberneticists, Walter Cannon (originator of the concept of homeostasis), and by Vernadsky. It is the latter who makes a point directly paralleling that made above by Simondon, he writes "in most of their works studying living organisms, the biologists disregard the indissoluble connection between the surrounding milieu and the living organism. In studying the organism as something quite distinct from the environment, the cosmic milieu, as Bernard said, they study not a natural body but a pure product of their thinking" (Vernadsky 1998 30).

Alliez' final term 'generalised dynamics' is also problematised as DeleuzeGuattari's position is seen to eliminate any kind of transcendentally generated general systems theory as well as dynamics. Their demand for a return to pragmatics, that in which "language never has universality in itself, self-sufficient formalisation,

a general semiology, or a metalanguage" (Deleuze and Guattari 1980/87 140/111), necessitates precisely this attack. The pertinent characteristic of the latter being an attachment to invariance and simplicity— not as opposed to complexity in any technical sense— to a degree that verges on the theological, although Deleuze will write in the *Logic of Sense* that *simplificatio*, or the "identity of the One or the unity of the Whole" (Deleuze 1969/90 398/297) is quite precisely, Christian. Attention must also be paid to the directly political element of the critique of hylomorphism, that is to stress the *origin* of hylomorphic schemas in top down control systems. Deleuze and Guattari write that "[r]oyal science is inseparable from a 'hylomorphic' model implying both a form that organises matter and a matter prepared for the form; it has often been shown that this schema derives less from technology or life than from a society divided into governors and governed" (Deleuze and Guattari 1980/87 457/369). Gilbert Hottois in his *Simondon et la philosophie de la 'culture technique'* has gone some way towards explicating an ethics, in the Spinozist sense of course, of hylozoism. We will see later how those thinkers who have followed Bruno's advocacy of a thesis of animate matter have all been led ineluctably along the road of political and theological heresy, and also how his critique of Copernicanism is intimate with a radically democratic, bottom-up politics. Against dynamics we counterpose attention to singularities (haecceities), coupled with the position that Deleuze was developing in *Difference and Repetition* where contra general systems, emphasis is placed upon the distinction between different types of system (physical and biological) on the basis of the "process of individualisation which determines that actualisation"

(Deleuze 1968/94 328/255). Similarly for Simondon, "the notions of substance, form and matter are replaced by the more fundamental notions of primary information, internal resonance, potential energy and orders of magnitude" (Simondon 1995 30). As such Simondon places considerable emphasis upon the political charge of the words chosen to express his position, and demonstrates that his range of concepts are all concepts of intensity and dynamism, rather than fixity and stability; it is also clear that Simondon's choice of terms is a direct parallel with Deleuze and Guattari's outline of the terms associated with the Spinozist analysis of affective bodies. As we shall see, this latter thesis is ramified and radicalised into an onslaught on ontological generalities in *Capitalism and Schizophrenia 2*. As we have already seen, the only other position, albeit one embedded in an entirely different disciplinary assemblage, that seems vaguely close to, or as conceptually rigorous and productive as, that of DeleuzeGuattari, is that of George Kampis, his positive engagement with Bergson seems to be critical in this regard. I shall draw upon Kampis' work, mostly implicitly, throughout this chapter and in the rest of the thesis in general.

Nomadism and Life at the Limit

The section of *Capitalism and Schizophrenia 2* with which we are directly concerned is

> Proposition III: The exteriority of the war machine is also attested to by epistemology, which intimates the existence

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> and perpetuation of a 'nomad' or 'minor science' (Deleuze and Guattari 1980/87 446/361)

The critical question asked here concerns the isolatable "modes of formalisation" (Deleuze and Guattari 1980/87 448/362) operated by these generic types of scientific enterprise. The distinction between *reproduction* and *following* is a properly pragmatic one derived from different modes of concept production, they are the modes of operation appropriate to the 'royal' and the 'nomadic' sciences respectively. Here we must take note that there is more at stake in the declension of the nomad than is frequently assumed— particularly in a certain way of reading DeleuzeGuattari as operating a quasi-Feyerabendian epistemological anarchism, or its equally simplistic political analogue. The concept of the nomadic is itself deeply embedded in several layers of Deleuze and DeleuzeGuattari's work, here briefly enumerated

i) in a reading of the great Nomadic socioeconomic formations and their modes of implication with metallurgical technologies;

ii) as the figure *par excellence* of the society that defines itself through geography rather than history (a principle of number against one of Euclidean geometry; this latter being frequently identified as a paradigmatic State science[29]);

iii) perhaps more importantly and less romantically as a society that deploys a principle of movement against the fixity of the sedentary state form (the condensed form of the enemy against which the

entirety of DeleuzeGuattari's thought is directed). In this respect Deleuze's work is unique amongst that of his contemporaries, in being one of the only attempts to follow the positions sketched out in Nietzsche's singularly important essay on 'Schopenhauer as Educator' (the major discussion of the 'following-reproducing' distinction is directly related to this essays' magnificent assault on State philosophy, the conversion of the philosopher into a "public professor or State functionary"); the value of this is attested to by taking Kant as representative of State thought. For Kant has a firm grasp upon the threat posed by the nomad to sedentary thought, declaring that "the *sceptics*, a species of nomads, despising all settled modes of life, broke up from time to time all civil society. Happily they were few in number, and were unable to prevent its [that is the government of sedentary reason, EA] being established anew" (Kant 1929 Aix). Kant is further credited with giving philosophy a juridical form and "tracing its doctrine of faculties onto the organs of state power" (Deleuze and Guattari 1980/87 466/376). This theme will be further pursued in the final two chapters examining Giordano Bruno and the inscription of the state in the cosmos.

iv) as a critical figure in the utter devastation launched upon ontological questions from *Difference and Repetition* onward, and in the role played by the concept of distribution, which from *Capitalism and Schizophrenia* onwards is joined by population, for it is within distribution that a split occurs between the "*logos* and the *nomos*" (Deleuze 1968/94 54/36)[30]. In this distinction a form of distribution is discovered that is accorded the name 'nomadic', the effect of which is

the introduction of "unsettling difficulties [...] into the sedentary structures of representation" (Deleuze 1968/94 55/37). Crucially, the nomos, denoting a distribution in space, marks out the importance of the topological dimension of the membrane/limit as operator of transductions (transcodings), the flattening or equivalence of exchange and production, the redundancy of the bounded entity. As Simondon writes

> *the living lives at the limit of itself, on the limit* [...] the characteristic polarity of life is at the level of the membrane; it is here that life exists in an essential fashion as an aspect of a dynamic topology which maintains the metastability by which it exists [...] the entire content of internal space is topologically in contact with the content of the exterior at the limits of the living (Simondon 1995 224–6).

The theme of the constant topological contact between organism and milieu, and the assault upon the integrity of that distinction, is a consistent refrain in the DeleuzoGuattarian corpus and finds itself worked out across all of the strata with which they deal, the anthropomorphic no less than the more obviously germane physicochemical and organic (Deleuze and Guattari 1980/87 627/502).

It is necessary to insist again that DeleuzeGuattari's deployment of Simondon also pays attention to the political implications of the critique of hylomorphism, as well as the replacement of its terms form-

matter, with the more mobile content-expression. The embeddedness of politics in this seemingly abstruse critique is already well attested to in *Capitalism and Schizophrenia 1* where Simondon is credited for discovering the roots of the machinic phylum, and for rendering technological developments immanent and allowing them to be conceived as a "relation that is subordinated to a field of forces operating as a concrete physical system" rather than as "an abstract unity or intellectual system reigning over separate subaggregates" (Deleuze and Guattari 1974/83 262/221). Similarly, the problem of the state in those lineages of political theory, in which it is conceived of as an abstraction, is transformed so that "it is no longer the transcendental law that governs fragments"; rather "it must fashion as best it can a whole to which it will render its law immanent"(Deleuze and Guattari 1974/83 262/221). This opposition is the Spinozist tradition constructed by Hardt and Negri, which "against the negative movement of the dialectic [...] present a positive process of constitution [and] conceive of democracy as an absolute, completely immanent government, free from any transcendent norm" (Hardt and Negri 1994 285 and 6). It is at this point that it becomes possible to insert the importance of the Spinozist move for Deleuze and DeleuzeGuattari on the grounds of the centrality of the logic of expression, of capturing the specificity of the ways in which the State instantiates itself according to precise diagrammatisations. Read in this way the immense range and power of the attack upon hylomorphism reveals itself in the most diverse corners of the DeleuzoGuattarian trajectory in all strata where it lays bare specific modes of individualisation without positing the necessity of there being a bare form welded to abstract substance.

Deleuze's destruction of the "fallacious concept of a sadomasochistic entity" (Deleuze 1967/89 50/57), for example, is implemented in precisely these terms; briefly, it is suggested that this entity cannot be described using either material or moral categories of identity, but must be tracked formally with attention fixed on the specificity of its patterning. Ultimately then, masochism, and sadism, like other material instantiations cannot be flattened out "with an abstract 'grid', as though a common libidinal substance flowed now into one form, now into another" (Deleuze 1967/89 41/45). In the same fashion, in *Cinema 2: The Time-Image*, the traditional canons of film theory are economically reduced by taking the components of cinematic representation as produced out of "a material not formed linguistically even though it is not amorphous, and is formed semiotically, aesthetically and pragmatically" (Deleuze 1985/89 33/29). These two cases could be multiplied endlessly, but the result is a significant move towards developing a radically new philosophical pragmatics.

Simondon with Spinoza

An important Spinozist dimension to the critique of hylomorphic schemas lies in the opposition of the plane of transcendence to that of consistency. In Deleuze's significantly titled little Spinoza book, *Spinoza: Practical Philosophy*, these types of plane are accorded the respective characteristics of the organisation or development of the transcendent or theological, as opposed to the composition of the immanent or consistent. In this case, in the chapter 'Spinoza and Us', in *Spinoza: Practical Philosophy* an ethological plane is constructed

couched in terms of milieu, unformed elements, composition, and velocity, a conceptual spine that effects a transductive operation between different material and conceptual strata. Critical in this respect is the working of the concept of immanence as an aspect of expression. The earliest location for this is in *Expressionism in Philosophy: Spinoza*, where Plotinus and Spinoza are praised for creating an *expressive immanence*. The latter plane, that of consistency or immanence, is explicitly conceived of as being built out of components from the Spinoza-Simondon conjunction, and as the rejection of any transcendentally governed schema of formation, pre or otherwise, structure or genesis. What is offered instead are "only haecceities, affects, subjectless individuations that constitute collective assemblages" (Deleuze and Guattari 1980/87 326/266):

Spinoza writes

> Bodies are reciprocally distinguished with respect to movement or rest, speed or slowness, and not in relation to substance (Spinoza 1989 E II P 13 L I)[31]

Similarly for Simondon:

> The existence of a plurality of systems of norms can be interpreted in a way other than *as a contradiction*. There is only a contradiction resulting from the *multiplicity of norms* if one makes of the individual an absolute and not *the expression of an individuation* creating a metastable state

only and provisionally as a discontinuous phase of transfer." (Simondon 1995 245).

Having made this connection between Spinoza and Simondon it seems necessary to point out Simondon's own, I have tried to show misplaced, and somewhat conventional hostility to Spinoza (in this connection one might bear in mind that Wiener's own attitude to Spinoza was equally negative, if considerably less nuanced, and highlighted by his championing of Leibniz as the "patron saint for cybernetics" for three reasons, the third being the most pertinent: i) for his pursuit of a universal symbolism, ii) the avowal of a calculus of reasoning, from which Wiener with his modernist orientation derives mathematical notation and symbolic logic, iii) and less directly, for his adherence to dynamics as against Spinozist geometry[32]). Simondon objects to Spinoza's "substantialist monism" (Simondon 1995 238) on the basis that all theories of substance, and here Simondon is using the terms of the above quoted Spinoza passage, but misreading them, "rely on a conception of exchange and modification which only know alteration and stable equilibrium, not metastability" (Simondon 1995 238)[33]. From the perspective of a conventional understanding of Spinoza, Simondon's point is a valid one, but it is clear that one of the major claims of the way in which we are— following Deleuze, Negri and Balibar— reading Spinoza, is that this critique is seriously misplaced.

The Vampire of Thought

The distinction then is set up in this way: reproduction is said to "imply

the permanence of a fixed point of *view* that is external to what is reproduced", similarly— and in a sense that could be seen to ally it to those sciences that are mechanical, dynamic (linear), or take a perspective of reversibility *vis à vis* physical processes— reproducing "treats differences of time and place as so many variables" (Deleuze and Guattari 1980/87 461/372), ultimately then these positions remain within the Kantian orbit, and are irrevocably transcendental. As early as *Difference and Repetition* Deleuze had realised that the concept of difference was only to be conceived in an empirical and materialist fashion, and was equating difference with intensity, "'difference of intensity' is a tautology" (Deleuze 1968/94 287/222). In *Logic of Sense* the constitution of difference as intensity is again taken up (as noted above) as an elaboration of Simondonian themes, a transcendental field composed of "pre-individual and impersonal singularities" (Deleuze 1969/90 348/297). Singularities in this Deleuzian and Simondonian sense are always multiple in and of themselves, composed of intensive degrees, each of which is already difference in itself: "Intensities comprehend in themselves the unequal or the different— each one is already different in itself— so that all of them are comprehended in the manifestation of every one" (Deleuze 1969/90 348/297). Intensity is never equal to the one, but to n -1, such that "philosophy is not concerned with the one, being (*l'être*)" (Deleuze 1997), but with multiplicity.

It is also in Simondon that Deleuze discovers the positing of the condition of metastability— a prior material grounding for the problematic of individuation— "the existence of a 'disparateness' such

as at least two orders of magnitude or scales of heterogeneous reality between which potentials are distributed" (Deleuze 1968/94 317/246). Metastability is defined by Deleuze as the constitutive condition in which a world composed of singularities-events exists, contrasted in equal measure to stability and to instability. Metastability refers to the state in which concatenations of multiplicities are "endowed with a potential energy wherein the differences between series are distributed" (Deleuze 1969/90 136/103). Metastability is the ground of a cosmos of febrile becoming, as supposed in contemporary complexity theory, which proposes to map the dimensions of physical systems whose condition is always far-from-equilibrium, just this side of chaos, it posits that all entities from the level of a cell, to an animal, to a society, a global economy, a planet, and a cosmos are in a permanent state of active becoming, of perpetual disequilibrium, or intensive difference generating new series continually. It is only now, with what is coming to be recognised as a third scientific revolution (to surpass the Newtonian, and Quantum[34]) that theoretical models, and empirical studies, can be made of such a realm. Nevertheless such a realm has been glimpsed before, in Bruno's infinite, acentric cosmos governed by a permanent will-to-form (Mendoza 1995 222-4), what Bloch, perhaps poetically has described as "the formative power inherent in things [which] never wearies of creating new forms" (Bloch 1986 849). It had been suggested in Bataille's *Accursed Share*, a grand attempt to create an abstract diagram adequate to such entities as disparate as "atom, molecule, micelle, cell, organism, society" (Bataille 1988 75) to the idea that all are characterised by an *excess*, a *part maudite*, it is this excess energy that is "translated into the effervescence of life" (Bataille I/1991 20/10).

In this sense Nietzsche is quite literally correct when he writes "that a state of equilibrium is never reached proves that it is not possible" (Nietzsche 1968 § 1064), a world that is a "monster of energy, without beginning, without end" (Ibid. § 1067). Since equilibrium is the absence of difference, it is equality, quite literally death, for as Depew and Weber write summing up the copious literature on the biological definitions of life and death: "the only time" that entities "achieve thermodynamic equilibrium is when they are dead [...] that is probably the best definition of biological death" (Depew and Weber 1996 466), stasis.

'Following' is the term that Deleuze and Guattari give to the only mode of investigation appropriate to the cosmos of "endless becoming" (Simondon 1995 21) that opens to thought that has apprehended the critique of hylomorphism. A mode in which one sets out in "search of the 'singularities' of a matter [matière], or rather of a material [matériau], and not out to discover a form" (Deleuze and Guattari 1980/87 461/372), in Simondon's language it is precisely within metastability that singularities are located and isolated by potentials, this then is where one becomes involved with the specific form of pragmatic immanentism that marks out the DeleuzoGuattarian programme.

At the heart of DeleuzeGuattari's frequently invoked critique of representation then, is this elaboration of a practice of 'following', nonetheless, it will be critical to show that the figure of 'following' cannot be constructed in a transcendent fashion, a problem that frequently plagues attempts to deploy the figure of the abstract

machine. There is no transcendent *method* of following, that can be laid out in the abstract, for "thought is like the Vampire, having no image, either to make a model of or to copy" (Deleuze and Guattari 1980/87 467/377). The warning that Isabelle Stengers attached to the concept of transduction also applies to that of 'following'. She warns that anyone who thinks that they can derive from the notion of transduction the "power to recognise that the production of a child having an individuated relation to language responds to the 'same' problem as the genesis of a crystal would have completely misunderstood the concept [*utilisé le concept à rebours*] and would moreover pay for it with the derision that would be aroused!" (Stengers 1997b 137)[35]. Following, like transduction, can only be emplaced in relation to concrete edges of decoding and deterritorialisation that are constructed in relation to specific bodies, problems and concepts. "Each abstract machine is a consolidated aggregate of matters-functions (*phylum* and *diagram*)" (Deleuze and Guattari 1980/87 637/511), that can only be invented in immanently derived analyses based on micropractice.

Following Matter, Tracking Haecceity

chapter iii

Organisation as Stratification: Immanent Relations in DeleuzeGuattari's Pragmatic Materialism

> There is no great difference between false materialism and typical forms of idealism.
>
> (Deleuze and Guattari 1974/83 29/22)

> Two great traditions clash, therefore, in the history of philosophical thought, setting up that *Kampfplatz* that is philosophy. But these two traditions are not those of idealism and materialism. They are the tradition of 'aleatory materialism' and all the rest.
>
> (Negri 1996b 61)

Perhaps the most distinctive feature of Deleuze and Guattari's polyvocal work and the feature that distinguishes them most sharply from their contemporaries in both Continental and Anglo-American philosophy who have taken, to varying degrees, the 'linguistic turn', is, as we have seen, their dedication to thinking a philosophy of matter, endowed with, amongst other things, the wholly new terms forged by Simondon in his critique of hylomorphism. This new materialism must attempt, as Toni Negri has claimed of *A Thousand Plateaus*, "construct the terrain upon which to redefine the materialism of the twenty first century" (Negri 1998a 86), and as such, must adequate to the global conditions of the late twentieth century, its cultures, sciences, politics. This chapter attempts to test this claim on the basis of a series of implementations. The peculiar difficulty of their work lies in its simultaneous performance and explication of the principle of the rhizome, by which it is immensely difficult to isolate single strands from within it, for their entire thought form is so very tightly enmeshed, each element with each other, that to examine one is to start dragging the entire œuvre out with it. Nonetheless, in this chapter, attention is paid to the thorough critique that DeleuzeGuattari offer of the principle of organisation and their advocacy, in its stead, of a principle of composition or consistency: "the plane of consistency or composition is opposed to another plane, that of organisation or formation" (Deleuze and Guattari 1980/87 456/368), the former is that encountered in following, the latter in representation. The route to this question involves a detour through an examination of the relationship between, on the one hand, the material cases and their conceptualisation given in

Organisation as Stratification

A Thousand Plateaus and, on the other hand, certain elements of Simondon's work on the interrelated questions of the limit and individuation. Arnaud Villani has paid some attention to the role played by the 'the material cases' in what he calls the physical geography of *A Thousand Plateaus*. I concur with Villani's claim that the principal characteristic of these 'cases' is the way in which they "effect the movement that they describe" and that in their singularity constitute series of "immanent syntheses" (Villani 1985 331)[36]. As such Deleuze and Guattari's concepts are invented, or extracted from a case study or body of disciplinarised knowledge and then given a transversal direction, in an attempt to achieve a *flatness* with those cases. It is this flatness that constitutes what Deleuze and Guattari call the plane of immanence, which "has no supplementary dimension; the process of composition [of the plane, EA] must be apprehended for itself, through that which it gives, in that which it gives. It is a plan of composition, not a plan of organisation or development" (Deleuze 1988b 128).

Horizontal and Vertical

This process of concept building on a plane of immanence, which aims at the horizontal extension of the horizons of conceptual space, is counterposed by Deleuze and Guattari to verticality as the dimension of metaphysical thought. In *What is Philosophy?* they go so far, on occasion, as to make verticality synonymous with the transcendent. This idea of the pushing of horizons is used extensively throughout the chapter devoted to 'The Plane of Immanence' in *What is Philosophy?* such that "it is the horizon itself that is in movement: the relative

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horizon recedes when the subject advances, but on the plane of immanence we are always and already on the absolute horizon" (Deleuze and Guattari 1991/94 40/38). Deleuze and Guattari define two types of horizon: the relative and the absolute; the former functions as a limit "which changes with an observer and encloses observable states of affairs" whilst the latter, the absolute is "independent of any observer, which makes the event as concept independent of a visible state of affairs" (Deleuze and Guattari 1991/94 39/36). The distinction is posed in a distinctly non-Kantian fashion, for Kant every concept "has its own horizon, that is a variety of things which can be represented, and, as it were, surveyed from that standpoint. This horizon must be capable of containing an infinite number of points, each of which has its own narrower horizon" (Kant 1929 A 658/B 686). The Kantian horizon then is an ordering concept, an imposer of hierarchy, a standpoint from which one proceeds up to the "universal and true horizon" (Kant 1929 A 659/B 687). Deleuze and Guattari's horizontality, is on the contrary, an extension of the abolition of hierarchy performed by Cusa and Bruno's thought of immanence, "opposed to any [...] hierarchical conception of the world" (Deleuze 1968/92 157/173), as in the various Medieval chains of being. Antonio Negri explains that Neoplatonism is interesting to Deleuze insofar as it's own subordination of the "'horizontal' relation to the order of the 'vertical' creation and hierarchisation" can be, and was, transformed into a philosophy of expression (a philosophy which as he have already seen, and as will continually be stressed, is central to Deleuze's thought), "a philosophy of surfaces, in order to eliminate any aspect of transcendence, of hierarchy, of emanation" (Negri 1991a 18), this

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aspect of Neoplatonism is also stressed in Alliez' commentary on Plotinus (Alliez 1991/95 63-123/27-74). Deleuze suggests that there is a counter tradition to this hierarchical thinking, and it is one that revolves around the linked terms immanence and expression, also identified with the terms *complicare* and *explicare* in a note he writes that it is "above all in Nicholas of Cusa and in Bruno that the notions acquire a rigorous philosophical character" (Deleuze 1968/92 159 n. 1/377 n. 12). In one of the most thorough statements of the direct relationship between immanence and expression, 'Immanence and the Historical Components of 'Expression[87]', Deleuze argues that the pursuit of univocal ontology, given in Spinozist immanence constitutes the only pure ontology. That is a "pure ontology" in which "Unity is only a property of substance and of what is" in which immanence "requires as a principle the equality of being, or the positing of equal Being [...] not defined by their rank in a hierarchy" (Deleuze 1968/92 157/173). It is the contrast offered between the rhizome, and the tree or arborescence that best captures the importance of the determination of these two dimensions: horizontality and verticality. It is precisely these kinds of transcendentally imposed schemas that Deleuze characterises as organisation, a plan imposed on an inert matter, presupposing the existence of stable entities. This critique is, as we have seen, coupled in DeleuzeGuattari's thought to Simondon's revolutionary thinking of individuation, a thinking that he describes as focusing on the process of individuation grasped as "an operation resulting from the meeting between, and compatibility of, a singularity and energetic and material conditions". Hence for Simondon

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> To seek the principle of individuation in matter, form, or force, is to restrict oneself to being able to explain individuation only in those particular cases that seem simple, such as the atom or the molecule that is instead of taking the genesis of the individual and supposing that genesis to be already made in formal, material or energetic elements, and owing to these elements already bearers of individuation, generating by composition an individuation which is actually simpler. It is for this reason that we have never wanted to undertake the study of the individual as starting from the elementary particle (Simondon 1995 79-80)

Go and Chess

The significance of the above statement for this thesis and, I would argue, for the DeleuzoGuattarian project in general, is revealed by examining one of the most important strategic moves made by Deleuze and Guattari in the plateau entitled '1227: Treatise on Nomadology:— The War Machine'. This strategic move will be used here to position DeleuzeGuattari in a critical relation to two of the most radical projects in contemporary systems theory and second-order cybernetics. That is George Kampis' work embodied in his theory of 'component systems', and the project of 'relational biology' pursued by Robert Rosen and Nicholas Rashevsky[38]. My starting point is the apparently banal observation that

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> Chess pieces are coded; they have an internal nature and intrinsic properties from which their movements, situations, and confrontations derive [...] Go pieces, in contrast, are pellets, disks, simple arithmetic units, and they only have an anonymous, collective or third-person function [...] elements of a nonsubjectified machine assemblage with no intrinsic properties, only situational ones (Deleuze and Guattari 1980/87 436/352)

Thinking along a parallel path, Rosen suggests that

> once we talk about *organisation,* we are in a relational context. We are basically defining a machine as a material system that admits (ie., that *realises*) a relational description, a description in terms of sets and mapping, and entailments between them (Rosen 1991 183)

Rosen's concept of entailment perfectly captures the idea of absolute, generative relationality that permeates this thesis; his argument is that the properties of components are strictly emergent and only generated from their position in a system, their "description changes as the system to which it belongs changes" (Rosen 1991 121). It is this complex concatenation of individuations and their material coordinates to which Simondon refers above that provides the motivation for Deleuze and Guattari in their pursuit of the (dated) event, which is "not only made up from inseparable variations, it is itself inseparable from the state of affairs, bodies, and lived reality in which it is actualised or

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brought about" (Deleuze and Guattari 1991/94 150/159). The crux of these investigations turns around the concept of organisation, and it is to organisation that we now turn.

Immanent and Transcendent

If, as Michel Foucault once claimed, Deleuze and Guattari offer an 'introduction to the non-fascist life', and if the mode of living such a life is embodied in the set of practices (and hence it is a process) known as the Body without Organs ("you can't reach it, you are forever attaining it, it is a limit" Deleuze and Guattari 1980/87 186/150), then the principal object of DeleuzoGuattarian critique is organisation (such an emphasis is of course in accordance with the lead given by Nietzsche to what would become, with Whitehead, a process philosophy, to prioritise and treat "Processes as 'entities'" Nietzsche 1968 § 655). Organisation, for Deleuze and Guattari is homologous with stratification, and it is within the *regime of signs*[39] constituting science that organised, stratified matters are of utmost importance.[40]

Running throughout the two volumes of *Capitalism and Schizophrenia* Deleuze and Guattari raise and elaborate upon a distinction between axiomatics and codes. It is made clear that this difference is crucial to understanding the differing modes of immanent and transcendent thought. In addition to this the concomitant attachment of stratification to axiomatisation is made. It is with the identification of axiomatics with a transcendent organisation, and code with immanent composition that this distinction assumes its importance (compare

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Deleuze and Guattari 1980/87 567/454 and 174/143). The axiomatic is taken to institute a regulative order (stratification), "an axiomatisation, a semiotisation, a physicalisation" which is contrasted to "a diagram [...] the programme of a stratum, against the diagram of the plane of consistency" (Deleuze and Guattari 1980/87 179/143). The mathematician Robert Blanché, the principal source of DeleuzeGuattari's understanding of mathematical axiomatics, insists that the axiomatic is no longer an analytic proposition, but is "a convention that delimits a certain field" (Blanché 1990 19, ~~my translation~~). Finally, Isabelle Stengers and Bernadette Bensaude-Vincent in their *History of Chemistry* give specific content to this in the field of chemistry, more precisely with reference to the history of crystallography, by suggesting that "the multiplicity and often the industrial interest of the properties linked to 'deviations' from the 'rule' were substituted for the conventional differentiation between the 'normal case' (an illustration of the rule) and 'defects' (a nonhierarchical group of cases, each associated with the circumstances that favour it)" (Bensaude-Vincent and Stengers 1993 259). The line taken by Stengers and Bensaude-Vincent lies in close proximity to that taken by DeleuzeGuattari, and what it helps to focus is the idea that for those disciplines that manifest the characteristics associated with the minor, the bodies or states of affairs that are of interest are, like Thom's seven catastrophe's, concerned with limit phenomena (when using Thom's model one must take great care not to import the Platonic basis of his mathematics, to ensure that they remain diagrams to be implemented rather than plans to be imposed), displays of rupture and heterogeneity: systems made perceptible only when they are in a state

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of collapse, systems in variation defined not by "constants and homogeneity but on the contrary by a variability whose characteristics are immanent, continuous, and regulated in a very specific mode (*variable* or *optional* [*facultatives*] rules)" (Deleuze and Guattari 1980/87 118/94). This is a thought that has preoccupied Deleuze since at least *Difference and Repetition* in which a concept only becomes real to the extent that "it designates catastrophes: either breaks of continuity in the series of resemblances or impassable fissures between the analogical structures" (Deleuze 1968/94 52/35); and it only ceases to be reflexive in order to *become* "catastrophic". Another implication to which I return shortly: catastrophe bears witness to "an irreducible ground which continues to act under the apparent equilibrium of organic representation" (ibid). That is to suggest that Deleuze's foundation of concepts of irreducible difference or fissure is a corrosive acid in the classical fixity of ontological grounds. The critique of the concept of partial objects, so important in the *Anti-Oedipus*, is a key element of this critique of unity, and at the same time one aimed at the dominant theme of Derrida's Heidegger inspired lament for lost presence. DeleuzeGuattari pointedly write: "We no longer believe in the myth of the existence of fragments that, like pieces of an antique statue, are merely waiting for the last one to be turned up, so that they may all be glued back together to create a unity [...] We no longer believe in a primordial totality that once existed, on in a final totality that awaits us at some future date" (Deleuze and Guattari 1974/83 50/42). This indeed is the grand thought to which the entirety of *Difference and Repetition* is dedicated: that "Difference, is in-itself already Repetition" (Deleuze 1968/94 169/129), that there is no

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"ultimate or originary fixed term" (ibid. 139/105) to be uncovered; put thus, it is also crucial in the critique of Freudianism, of signifying systems, that there is no originary trauma to be resolved; only the effects of the concatenation of heterogeneous series. But this, is to run ahead of ourselves, and so let us return to another aspect of the question of organisation.

In a lecture entitled 'The Nature of Flows' Deleuze insists that the concept of flow is to be thought in relation to five others: that of pole; code or accounting system; stage of material or legal transformation; sector; and stock (the specific inflection of these terms is given by their imbrication in, and derivation from, the discourse of Keynesian economics). However it is the relation of flow to the second of these five correlates, ie. code, that is insisted upon as of primary importance. And in regard to a philosophy of matter this is entirely apposite. It is impossible writes Deleuze to "seize flows other than by and through the operation which codes them: the fact is that a non-coded flow is, strictly speaking an unnameable or merely a thing" (Deleuze 1971).

As we have seen, code is associated with flux, and axiomatics is, as DeleuzeGuattari note, intimately involved with stratification (Deleuze and Guattari 1980/87 75/57). If one goes along with Deleuze and Guattari here, it follows that organisation is to be rejected in favour of an approach predicated upon composition, immanence, univocality. In such an approach, matter is taken to be differentiated, both philosophically and empirically, only by virtue of intensities, in which particles, or the objects of an individuation, can only be differentiated

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by their "speed and that enter into this or that individuated assemblage depending on their connections, their relations of movement" (Deleuze and Guattari 1980/87 312/255). It is against this background that classical ontological questions predicated upon Being are severely problematised, the temptation is to say that there is no space for what counts as ontological questions in a DeleuzoGuattarian cosmos, simply because the focus cannot be placed upon a being but rather upon the dynamic relationships that hold them together. Ontological questions for DeleuzeGuattari can only be asked from the perspective of Spinozism, and in this latter, ontology is always a substrate of politics (Antonio Negri's formula for Spinozism is 'ontology + politics = materialism'). An account, of this character, predicated upon relation/force (an index of consistency, or of consolidation) or the *intermezzo*, is not a moderated or different ontology: it is a different species of analysis altogether, the Greek *on* is non-existent, and its study does not figure, what does figure then is what Nietzsche described as the "seductive flash of gold on the belly of the serpent *vita*" (Nietzsche 1968 § 577). Haecceities, degrees, intensities, individuations each having their own modes of interrogation, which refuse the rigidity of all ontologies which are by default locked into sedentarisation. This latter is expressed by the return to pragmatics, "in which language never has universality in itself, self-sufficient formalisation, a general semiology, or a metalanguage" (Deleuze and Guattari 1980/87 140/111), an utter rejection of all philosophical positions that fail to produce themselves as modes of realisation immanent to that "energetic, molecular dimension", a space "that deploys its materiality through matter, a number unto itself that propels its traits through

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form" (Deleuze and Guattari 1980/87 509/409). This formulation will assume greater importance later when we see it emplaced in a discussion of morphogenesis.

Excursus on Affective Bodies

It is absolutely vital to pause here, to stand back, and to note the role played by Deleuze's reading of the bellicose Spinozist doctrine of affective bodies. Both Negri and Deleuze make it perfectly clear that they consider Spinozism to have been a declaration of war in philosophy, and the ground staked out, the *Kampfplatz*, is always that of the body, or of materiality. For Negri, Spinoza's corporeal transformation of the scene of philosophy marks a "horizon of war" (Negri 1991a 144), whilst for Deleuze, Spinoza's great provocation that "no one has yet determined what the Body can do" (Spinoza 1985 E IIIP2D) is a battle cry, a demand to shift the ground of philosophy from the abstract to the material. To respond to Spinoza, to be a Spinozist is a great refusal, a refusal to think in accord with what Deleuze calls the "traditional image of thought" by which he means "a more or less implicit, tacit or presupposed image of thought which determines our goals when we try to think" (Deleuze 1994 xvi)[41]. In this case, the move beyond the image of thought constitutes a refusal to

> define a thing by its form, nor by its organs and its functions, nor as a substance nor as a subject [...] we will define it by *longitude* and *latitude*. A body can be anything; it can be animal, a body of sounds, a mind or an idea; it can

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be a linguistic corpus, a social body or a collectivity. We call longitude of a body the set of relations of speed and slowness, of motion and rest, between particles that compose it from this point of view, that is, between *unformed elements*. We call latitude the set of affects that occupy a body at each moment, that is, the intensive states of an *anonymous force* (force for existing, capacity for being affected). In this way we construct a map of the body. (Deleuze 1988b 127)

What is important though, is to realise that we have also gained, as a byproduct, an insight into the apparently flippant designation of Louis Hjelmslev as a "Spinozist geologist" (Deleuze and Guattari 1980/87 58/43), on the basis that, as John Deely writes, the "priority of relations over the intrinsic constitution of subjective being in the case of objects in their difference from things has best been stated in semiotics by Louis Hjelmslev" (Deely 1994 217). The horizon of ontological questions is the Spinozist one of speed, that is to say of an intensive multiplicity, and as such is not concerned with form, but rather with "a complex relation between differential velocities" (Deleuze 1988b 123). Correlate with this is the locking of ontological questions into the horizon of the concrete, as questions about individuation, the pursuit of "internal genesis" which in Deleuze's terms "consist[s] of intensive quantity rather than schema" (Deleuze 1968/94 26/40). In this Deleuzian understanding, Spinoza and Simondon are fused, such that the "individuation of the finite [...] proceeds from an infinite quality to a corresponding quantity, which divides into irreducible intrinsic or

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intensive parts" (Deleuze 1968/92 182/199)[42]. The novelty then of the ontological position staked out by the tradition in which Deleuze and Guattari position themselves lies in its predication— contra the philosophies of representation— not on a fixed ur-ground, not on a search for a lost plenitude or origin, or for ideal forms, but on intensive difference. An ontological perspective cognisant only of the intensities generated from what we might call cosmic heterogenesis, something akin to Bruno's will-to-form (Mendoza 1995 222-4). Intensity is locked into affect, and affect is always a question about relation and production, such that this recasting of ontology has a further aspect. The prioritisation of relation (we have already seen that intensity is only generated out of relation, the concatenation of heterogeneous series), which is illustrated on certain strata by Deleuze, and DeleuzeGuattari's, deployment of the ethology— the Umwelt research— of Jakob von Uexküll, the inventor of "an admirable theory of transcodings" (Deleuze and Guattari 1980/87 386/314)[43]. Or better still, it is not a deployment, but a becoming-Spinozist of Uexküll: in which "an animal, a thing" or indeed any entity that Deleuze would identify as a body "is never separable from its relations with the world. The interior is only a selected exterior, and the exterior, a projected interior" (Deleuze 1988b 125). The discussion of Uexküll in the plateau '1837— Of the Refrain' has two principal results. First, in Deleuze and Guattari's hands, Uexküll's work, that of a self-confessed Kantian for whom "the task of biology is to expand the result of Kant's research" (Jakob von Uexküll quoted in T. von Uexküll 1992 288), and who Heidegger saw fit to describe as the most interesting biologist alive, becomes an interesting and unexpected elaboration of Spinozism. That

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is to say it lays the grounds for a possible displacement of the study of consciousness and subjectivity from its current dominance by rivalling schools of behaviourism and some form of Kantian or Heideggerian phenomenology, to a Spinozist concern with affect, power and relation— a decidedly nonhumanist and nonanthropomorphic approach. Second, it allows for a Spinozism expressed in the terms of Simondon's analysis of the role of the membrane in the living. Needless to say, this detour through Uexküll, gives us a central mechanism of the Spinoza-Simondon conjunction or thought-event, in which all questions which had previously been subject to the stultifyingly artificial, reifying distinctions between subject and object, organism and environment, come to reside in relation, in the *intermezzo*[44].The combination of Simondon and Uexküll is of especial importance here because in addition to a philosophical programme for a recasting of an ontology of becoming, and a critique of the stasis of Kantianism, they offer concrete studies of the mechanisms of individuation (Simondon), and of the formation of milieus of becoming from the perspective of the nonhuman.

> The 'thing-in-itself' nonsensical. If I remove all the relationships, all the 'properties', all the 'activities' of a thing, the thing does not remain over; because thingness has only been invented by us owing to the requirements of logic, thus with the aim of defining, communication (to bind together the multiplicity of relationships, properties, activities). (Nietzsche 1968 § 558)

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The emphasis on production, or alternatively becoming, is a necessary component of an ontology predicated upon the priority of relation or of force. In Deleuze and Guattari force and relation are almost synonymous. In his discussion of the diagram, Deleuze writes that "the power to be affected is like a *matter* of force, and the power to affect is like a *function* of force" (Deleuze 1988a 72), it is then in force or relation that one apprehends mutant emergences, the creation of the new. This emphasis on both being affected and having the power of affecting makes clear that we are dealing with a concept with both Nietzschean and Spinozist elements, that *conatus* and will to power are to be understood conjointly, as means of understanding that mutual process in which organisms both make, and are made, by their worlds. Acting in the world adds a new strata to it: affections, forces are never single, it is in fact absurd to think of them as such, they are always, already plural, in relation. Massumi and Dean posit this force-relationality pair as the basis of a materialist political philosophy, they state that "force is relational, it is the very stuff of relationality: non-coincidence, differential, vector, less a thing than matter and energy at their point of indiscernibility [...] it is becoming" (Dean and Massumi 1992 157). This set-up and its relationships with the Uexküll schema outlined above gives us the basis to liquidate questions of subjectivity, meaning, ideology, in both materialist political philosophy, as Massumi and Dean state, and in studies of the nonhuman world, which have been dominated by the importation of such anthropomorphic terms.

It is in the tradition of such a political philosophy that Michael Ryan can write, that Spinoza privileges "potential (*potenza*) against power"

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and that "Potential is the materialist production and constitution of being in Spinoza" (Ryan 1991b 216).It is on this basis that we can say that this process of production, individuation in Simondon, becoming in Nietzsche and Deleuze is not to be understood as tending towards a finished state, a final entity, as Bergson puts it "matter or mind, reality has appeared to us as a perpetual becoming. It makes itself or it unmakes itself, but it is never something made" (Bergson 1913 287). Further, "it does not aim at a *final state*, does not flow into 'being'" (Nietzsche 1968 § 708), any attempt at positing either ends or beginnings is irreducibly theological, it has an "ulterior theological motive" (Ibid. § 1066). This realisation is crucial to Giordano Bruno and it is the starting point for his conception of an infinite universe with neither centre, nor limit. This materialist thought is by definition anti-teleological, opposed to every shred of transcendence, any attempt to reintroduce a notion of God: "Becoming must be explained without recourse to final intentions; becoming must appear justified at every moment [...] To this end it is necessary to deny a total consciousness of becoming, a 'God', to avoid bringing all events under the aegis of a being who feels and knows but does not *will*" (Nietzsche 1986 708). From this perspective, Nietzsche's scrutiny of the science of his day offers the vital basis for a critique of those trends in contemporary science and technoculture that are attempting to reintroduce a thought of God into cosmology[45].

Incorporeal Materialism and Schelling

The relationship between philosophy and science being sought here is

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asymmetric and is bound up with a conceptualisation of the limit, or rather with what it is that the limit materialises in the specific case in which it is embedded:

——philosophy is *dependent* upon the passing of words to the limit, the deformation of concepts, as in Whitehead's demand that "[w]ords and phrases must be stretched towards a generality foreign to their ordinary usage", (Whitehead 1978 4) or Ciliberto's description of Bruno's concept of language as "an expressive reality" in which "the linguistic plane becomes interwoven with the essential planes of human history'" (Ordine 1996 154)[46].

——science is *dependent* upon bodies overstepping "the limit of their figures" (Deleuze and Guattari 1980/87 138/108), in defects, instabilities, that are subject to what DeleuzeGuattari call *incorporeal transformations* (Deleuze and Guattari 1980/87 132/108).

I propose that the development of an incorporeal materialism is another Schellingian element in DeleuzeGuattari's work, derived as it is by Schelling from his critique of dialectics, and from his deep immersion in Bruno (for Bruno's account of incorporeal transformation see his 1998 75—9). As a critique of dialectics it is doubly connected to Deleuze and Guattari. The Schellingian critique is, as we shall see, a direct precursor of the one incorporated by Deleuze from Bergson. In a pointed reference to Hegel, Schelling suggests that the problem with contemporary philosophy is "its lack of intermediary concepts [...] what is not morally free is straightaway mechanistic, what is not spiritual in the highest sense is corporeal", such concepts are, he argues "the only genuinely explanatory concepts in the whole of science" and to be

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without them is to be "fully incapable of discovering truth" (Schelling 1997 150). It is this insight that leads Schelling to propose a concept of the incorporeal, for the above citations are in response to the question "what is it that leads most people to slander matter?" Schelling argues, on the basis of his concept of the intermediary (or multiplicity) that the accepted understanding of "the construction of matter out of forces" coupled with the fact that forces "are undeniably something incorporeal" compels one to comprehend matter as being constituted by the incorporeal. He goes on to argue that without a "point of transfiguration" the "transition from the inorganic to the organic would be inconceivable" (Schelling 1997 151).

This Schellingian concept of the incorporeal transformation is absolutely critical to DeleuzeGuattari's philosophy of matter, because it is here that the relationship between bodies, the immanent limit and an infinitely variable matter is thematised, a matter no longer subject to the statistical capture of hylomorphic determinations. To quote from *A Thousand Plateaus* "an incorporeal transformation is still attributed to bodies, but it is now a passage to the limit: that is the only way, not to eliminate death, but to reduce it or make it a variation itself" (Deleuze and Guattari 1980/87 137/108). This passage goes on to introduce the opposition between the major and minor sciences such that the attachment of pragmatics (materialist philosophy) to minor science and the philosophy of matter is clarified.

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Spinozist Bodies

From the distinction given above it can be seen that philosophical assemblages are those in which it is "words that pass, words that are components of passage" that are to be constructed, as opposed to "order-words [that] mark stoppages or organised, stratified, composition" and in which one is attempting to "transform the components of order into components of passage" (Deleuze and Guattari 1980/87 139/110). Whilst scientific assemblages depend upon the recognition of matter in states in which it is bodies that pass to "bifurcations, slowing-downs, and accelerations produce holes, breaks and ruptures that refer back to other variables, other relations, and other references" (Deleuze and Guattari 1991/94 118/124).

This condition of dependency denotes a criticality which can be indexed as a vector of deterritorialisation (transversality), and as such, the relationship between science and philosophy becomes one that is processed as autonomous, yet linked or articulated. Hence we confront a problem of organisation (which is, as we have seen, necessarily an axiomatic or a stratification), because science also has passwords and philosophy has bodies, Spinozist bodies. Superficially this can appear to be implicit (hence the rampancy of antiphilosophical tendencies in science best embodied perhaps in the work of such figures as Sokal and Briqmont[47]), nevertheless concepts can always *become* given in science. This denotes an ambulant coupling of affectation and event, by drawing the distinction in this way it becomes apparent that there are both incorporeal and corporeal events, and it is philosophy that is associated

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with the former, and science with the latter. These assays of the limit concur with the attempt by DeleuzeGuattari to conceive of a historical breach between minor and major sciences (see in particular the discussion in the plateau 'November 20, 1923: Postulates of Linguistics', Deleuze and Guattari 1980/87 137–9/108–10 and *passim*). The ultimate object of forcing this distinction is not the resurrection of some binary choice or prioritisation, but the active *invention* of a philosophy and science of matter subject to infinite variation, the creation of a plane of "a single liberated matter that contains no figures, is deliberately unformed, and retains in expression and in content only those cutting edges, tensors and tensions" (Deleuze and Guattari 1980/87 138/109)[48].

Immanence partout

Any attempt to do philosophy under the aegis of DeleuzeGuattari must be welded to a pragmatic commitment that it is materiality and immanence that are primary, *immanence partout*. This will mean that in sharp contradistinction to philosophy understood as the protector of images of thought, as an affinity with the true (the philosophy of the State), or the transcendent and absolute; philosophy in the way in which DeleuzeGuattari practice it, declares that the concept is lacking in meaning "to the extent that it is not connected to other concepts and is not linked to a problem that it resolves or helps to resolve" (Deleuze and Guattari 1991/94 76/79). This, as we saw in the first chapter, is to characterise Deleuze and Guattari's concepts as produced in concrete analyses, and bearing an immanent relationship to a body of

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knowledge, of historical, technical and political procedures. The immanent character of Deleuze and Guattari's concepts then is posed in direct contradistinction to Kant's declaration that "reason is never in immediate relation to an object, but only to the understanding [...] it does not, therefore, *create* concepts (of objects) but only *orders* them" (Kant 1929 A 643/B 671). DeleuzeGuattari's philosophy is, therefore, distinctly non, even anti-Kantian, in that it is only concerned with the production of concepts that are, in the words of *What is Philosophy?*, situated by a distinction found within the scientific function around the interlinked questions of inseparable variations (philosophy), and independent variables (science). "Events on a plane of immanence and states of affairs in a system of reference (the different status of intensive ordinates in each case derives from this since they are internal components of the concept, but only coordinates of extensive abscissas in functions, when variation is no more than a state of variable). *Concepts and functions thus appear as two types of multiplicities or varieties whose natures are different*" (Deleuze and Guattari 1991/94 121/127). It is in the selection of problems then that one draws the singular relation between a minor science and a minor philosophy. A point of note here is that whenever Deleuze deploys the concept of the multiplicity or of the multiple he is signalling the embeddedness of this concept in a resolute opposition to dialectic, deriving from his longstanding commitment to Bergson, and in particular to the decisive influence exerted on him by Bergson's analysis of the two kinds of multiplicity in the second chapter of his *Time and Free Will*. This is of course especially pertinent when it is a question of methodology. Consider for example this introduction of the

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issue in Deleuze's 'The Theory of Multiplicities in Bergson', "the very notion of multiplicity taken as a substantive implies a displacement of all of thought: for the dialectical opposition of the one and the multiple, we substitute the typological difference between multiplicities"[49]. The introduction of the concept of multiplicity is important for another reason beyond its role in a demonstration of the abstract (in a pejorative sense) character of dialectics. Multiplicity gives Deleuze and Guattari a criterion for the selection of true problems, the discernment of false ones: it allows them to *invent* problems, and as such gives their philosophical symptomatology a genuinely pragmatic basis. It is no mere coincidence that it is precisely at the point that Deleuze is giving his account of this invention, in the first chapter of his *Bergsonism*, that he cites Marx's dictum: "Humanity only sets itself problems that it is capable of solving" (Marx quoted in Deleuze 1991 16)[50]. Marx's sentence continues, "it will always be found that the problem itself arises only when the material conditions for its solution already exist or are at least in the process of formation". Invention means the shattering of the frameworks imposed on thinking by the orthodox canons of knowledge (Marx's ruling ideas). Deleuze calls it a prejudice transmitted by order-words towards accepting ready-made problems, accepting 'Being', for example, as *the* philosophical problematic *par excellence*, it means the invention of minor disciplines with their own problematics. The rejection of ready-made problems is a refusal to think in accord with the State-form and its various intellectual and cultural assemblages (what Althusser would approximate to in his concept of the 'Ideological State Apparatus' or ISA). The character of these minor disciplines, of this invention, however is not arbitrary, this is no license

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for extreme subjectivism, for as we are always concerned to show, the thought of the State and the thought of heresy each have their own abstract diagrams, and an invention is always made on the basis of the possible, in Marx's words, "when the material conditions for its solution already exist".

Philosophical Invention

Philosophical concepts then can be characterised as being produced locally, embedded in machinic assemblages of thought and matter, as being immanent to a specific case, and as located on a transversal line drawn through the strata. Immanence becomes resolved as method and content. This philosophical mode runs a line in tandem with what Antonio Negri calls the constitutive criteria of Marx's materialist method, a method whose criteria are determinate abstraction, tendency, practice, principle of 'constitution' (of the structure), it is barely surprising, given that in Negri's construction of Marx's philosophical genealogy his only philosophical predecessor is Spinoza, that the moment in the *Grundrisse* from which these criteria spring is that at which Marx identifies production with consumption, and in turn identifies this with the Spinozist *determinatio est negatio*[51]. This Spinozist Marx will become increasingly important as this thesis progresses, both in terms of philosophical practice and the formation of concepts, the selection of problems.

The profound singularity of DeleuzeGuattari's joint work is marked not just by a mode of conceptual invention, prodigious as it is, nor by a

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mere recasting of philosophical concerns in the crucible of a sustained critique of a series of legacies, Freudian, Marxist, structuralist, phenomenological, cybernetic, and analytic. The shattered detritus of a series of modes of thinking all of which were, to varying degrees, characterised by a confidence as to their ability to secure an absolute point of view, by their harbouring of some kind of progressivist illusion, and all of which sought to sketch a "transcendental genesis of meaning, truth, or the conditions of possibilities of every truth" (Althusser 1997 11). Rather, with Deleuze and Guattari one is led to the invention of a plastic and positive set of precise theses, which constitute the fundamenta of what we are describing as immanent or pragmatic materialism (Hardt and Negri 1994 17).

The task here then is to continue with the elaboration of the essential productive propositions of such an enterprise. I have suggested that a critical precursor for this enterprise is Simondon's projection of his own mode of conceptual production as an allagmatic theory, "the theory of operations" in contradistinction to, and symmetrical with the theory of structures (Simondon 1995 260). Robert Rosen too, in outlining his attack on reductionism, dynamics, and mechanism in the Newtonian-Cartesian model of science proposes that what is called for is a form of relational modelling in which the component is championed against the particle; the component for Rosen is, crucially, the *"particle of function"* (Rosen 1991 120), Rosen's position is explicitly cast in terms that are critical to what he takes to be the ontology of stasis and discrete things underpinning most science. In a direct parallel to Rosen's work, Karl Pribram[82], one of the most interesting of contemporary neuroscientists

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has explicitly followed Bergson in developing a position that seeks to move beyond both state and process classifications. Pribram found that when attempting to classify brain cells by function, both of the traditional options, that is state and process, were severely deficient, on the basis of such categories, he writes, he could "no more classify the brain cells than [he] could classify people". In their stead, he found that it was only a schema based on "the *properties* of a network or group of cells that permitted classification" (Pribram 1987 165). Pribram's work then points to the necessity of a relational, pragmatic and intensive modelling, and in this respect recalls Rosen's concept of entailment that we encountered earlier. From a vantage point similar to that of George Kampis, Rosen castigates most of what passes for revolutionary science (here I refer to the rhetoric of what is vaunted as the complexity revolution) as being fundamentally traditional at the level of ontology and epistemology[53]. Rosen's position may be seen as a continuation of the scientific tradition tracked in Gilles Châtelet's recent *Les enjeux du mobile: mathématique, physique, philosophie*. Châtelet focuses upon those recurring moments in the history of the physical sciences in which the virtual has erupted to displace the dominance of the Aristotelian presumption of stable forms. He notes for example that Galois' *Theory of Algebraic Equations* "no longer searches for 'solutions' (in an expression such as x =...) but describes the very dynamics of this research through the gradual individuation of roots"[54]. It is no surprise then that in Herbert Simon's genealogy[55] of versions of complexity in his *The Sciences of the Artificial* those in which we are interested are distinctly absent. This absence is resultant from the fact that the versions of complexity cherished by Simon remain within the

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orthodox ontological framework whose persistence and whose unique claim to authority is undermined by, amongst others, Châtelet and Rosen.

Immanent Criteria, Practice

It is imperative to note here, that one of the results that is being claimed for DeleuzeGuattari's work, as exemplified principally in *A Thousand Plateaus* (and perhaps somewhat formalised in *What is Philosophy?*) is that it represents a thorough break with currently disciplined modes of theoretical work. It is suggested that this break is not just on the level of the ontological and epistemological positions that it assumes, but, that embodied in Deleuze and Guattari's work is a unique attempt to respond to the unavoidable challenge thrown down to philosophy by Marx's eleventh thesis on Feuerbach. The claim then is that Deleuze and Guattari are announcing a renewal of a philosophy of practice, an interventionist, pragmatic, materialist philosophy. The critique of organisation is seen in this light as an imperative element of the "long tradition that had fostered heresy and struggle [...] that organises itself as a theoretical practice that, on the battlefield between ideologies that philosophy represents, sustains and imposes an antidialectical, antihumanist, antihistoricist point of view." (Negri 1996b 61). A point of view that refuses all teleologies and finitude, and that positively maintains the "search for an open subjectivity that would construct theory and practice together, that is to say a concept of practice in which to resolve philosophy" (Negri 1996b 59), a practice adhering to what Etienne Balibar, in a fine analysis of Spinoza's

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politics, calls the "*continuous production*" of human individuals (Balibar 1998 65)[88], and that Simondon calls the "fundamental mode of becoming: *the living being conserving in itself an activity of permanent individuation*" (Simondon 1995 27). For Deleuze and Guattari, as for Negri and Balibar, this cannot be a question of making revolutionary proclamations, the question of practice must be an immanently conceived and executed part of the analysis at hand, they are inseparably intertwined and constitutionally indivisible from each other. Practice in Deleuze and Guattari's understanding is the art of forming multiplicities or becomings (the two are synonymous), and this cannot be done according to a "preformed logical order" (Deleuze and Guattari 1980/87 306/251), this however is not to counsel the random, the unthought, or the simplemindedness of the anarchic. The formation of multiplicities, whilst lacking in "preformed logical order"— transcendental blueprints such as the dogmatic adherence to a stable and universally applicable revolutionary programme (see for example the politics of the Stalinised Third International, a classic case of top down politics), or the imposition of abstract schemata— does have *criteria*. These criteria are local, immanent, micrological decisions that utilise the material at hand, for nothing can be brought in from the outside. They write:

> Practice does not come after the emplacement of the terms and their relations, but actively participates in the drawing of the lines: it confronts the same dangers and the same variations as the emplacement does. Schizoanalysis is like the art of the new. Or rather, there is no problem of

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application: the lines it brings out could equally be the lines of a life, a work, of literature or art, or a society, depending on which system of coordinates is chosen (Deleuze and Guattari 1980/87 249/203)

In a parallel move, George Kampis writes

> By describing the general 'laws' of component-systems independently from their material realisation (molecular, cellular, organismic, mental, cultural), a deep unity of the various phenomenological domains can be recognised, and this makes a metatheory of systems that range from biology to society possible (Kampis 1991 275)

To reiterate, what is derived from the drawing of lines is a set of concepts, concepts of matter, concepts demonstrating a pragmatic and an immanent character. The terms 'pragmatic' and 'immanent' themselves differ radically from their canonical usage within philosophical history by their activation as questioners of disciplinarisation, by their being conceived on, and as, concepts of the limit, a limit that is always conceived by DeleuzeGuattari as material and numerical (Deleuze and Guattari 1991/94 112/118). As we saw in chapter two, DeleuzeGuattari unquestionably follow Simondon in the construction of the most innovative and radical elements of their *logic of expression*, the spine of their distinctive materialism; as such, we will maintain that the question of the limit occupies *un rôle primordiale* (Simondon 1995 91). The limit or membrane is where for Simondon

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"everything happens" (Simondon 1995 26), and where for microbiologist Lynn Margulis, life happens[57].

Margulis' theory of symbiotic evolution is predicated upon and develops a profound meditation upon the meaning of membranes for the identitarian sanctity of the bounded entity, and upon the "old metaphysical prejudice, [...] the thinly disguised axiom [...] that human beings are radically separate from all other organisms" (Margulis and Sagan 1986 19). She anatomises those philosophies and sciences that take it upon themselves to search for a mark of distinction whether it be the possession of a soul, of language, of technology "something, *anything*" that can be used to "unequivocally distinguishe[s] people from 'lower' life forms" (loc. cit.). Margulis' work constitutes powerful ammunition in the philosophical critique of the unitary self, of the *eidos*, and of the species, and provides the necessary scientific basis for a materialist, energetic, contagious antihumanism. So far as Margulis is concerned, one can develop the argument of the 'Memories of a Bergsonian' plateau (Deleuze and Guattari 1980/87 290—2/237—9), in which a *becoming communicative or contagious* is proposed, such that the thesis of symbiosis as conceived under the aegis of the concept of the block of becoming, is mobilised as a key concept in the development of a critique of molar Darwinism: "Becoming is involutionary, involution is creative" (Deleuze and Guattari 1980/87 292/238). Similarly, against Darwinism, "becoming is" shown to be "not an evolution, at least not an evolution by descent and filiation".

Evolution, for Deleuze and Guattari, only contains veritable becomings,

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and this is a truly Margulisian thought, in the "domain of symbioses, that bring into play beings of totally different scales and kingdoms, with no possible communication" (loc. cit.). This transversal communication across the heterogeneous is at the heart of the machinism of DeleuzeGuattari's thinking; the machine in their work is defined, beyond any technical specification, as the assemblage of the heterogeneous. It should be apparent how this critique reiterates a point raised earlier as an element in the construction of Deleuze and Guattari's ontology: the championing of the horizontal as a principle of immanence against the verticality of the transcendent. Molar Darwinism is built upon pure vertical lines of descent and filiation (the perfectionism of Linnaean forms), and critiqued by DeleuzeGuattari and Margulis' horizontal contagious involution. Contagious communication. "Contagion, epidemic, involves terms that are entirely heterogeneous: for example, a human being, an animal and a bacterium" (Deleuze and Guattari 1980/87 295/242). This is indeed the case with the relationship between deep sea fish and the bioluminescent bacteria that inhabit them, permitting their hosts to illuminate the Hadean darknesses of the bottom of the seas (Pain 1999), and between fungi and trees, indeed the main reason, Margulis points out for the latter's resistance to cultivation is the intense degree of the symbiotic relationship, non-replicable in the factory conditions of modern agriculture[58]. "There is a block of becoming between young roots and certain microorganisms, the alliance between which is effected by the materials synthesised in the leaves (rhizosphere)" (Deleuze and Guattari 1980/87 291/238). A contiguous path opens here, and it is one that will remain largely implicit in my remarks, leading to the beginnings of an attack upon the

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assumptions of the Neo-Darwinism that Lynn Margulis has aptly described as "a minor twentieth century religious sect within the sprawling religious persuasion of Anglo-Saxon biology" (Margulis 1997 100), an attack born out of the congruence between Simondon, Margulis, Rosen, and DeleuzeGuattari[89]. The biological tradition that this would most closely resemble would be that of a revivified developmentalism, what has been dubbed the "new Geoffroyism" (Depew and Weber 1996 433), in particular its emphases on morphogenesis, which as Deleuze suggests "is all about folding" (Deleuze 1990/95 216/158), and thermodynamics as applied to radically open systems, the historical names to which this tradition is attached would be Geoffroy, d'Arcy Thompson and arguably those elements of Waddington's work where it is inflected by Thom, an affective, intensive, contagious biology. A figure such as Kauffman would also be important here, as he assigns a critical role to morphogenesis, indeed his account of rhythmic phenomena, and his opposition to a theorisation of evolution that operates according to filiation, concurs with the DeleuzoGuattarian prioritisation of consistency in the examination of assemblages or organisms, with the opposition of "epidemic to filiation, contagion to heredity, peopling by contagion to sexual reproduction [...] Unnatural participations [...] spanning the kingdoms of nature. Propagation by epidemic, by contagion, has nothing to do with filiation by heredity" (Deleuze and Guattari 1980/87 295/241)[90]. It is these morphological practices that tend towards the characteristics of nomad science, continuous variation, the display of adequation, inequations, pursuit of singularities in matter, folding specifications, hylozoism, material-forces *contra* matter-form (vis.

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Deleuze and Guattari 1980/87 458/369). The question of consistency is crucial here as it operates as a central weapon in any attempt to shatter the stratifying procedures of molar or royal science:

> the problem of *consistency* concerns the manner in which the components of a territorial assemblage hold together. But it also concerns the manner in which different assemblages hold together, with components of passage and relay (Deleuze and Guattari 1980/87 403/327).

Topological Thermodynamics. Simondon Again

> *the living lives at the limit of itself, on the limit* [...] the characteristic polarity of life is at the level of the membrane; it is here that life exists in an essential fashion as an aspect of a dynamic topology which maintains the metastability by which it exists [...] the entire content of internal space is topologically in contact with the content of the exterior at the limits of the living (Simondon 1995 224—6).

The most perceptive observers of the scientific revolution currently underway, the explorers of that unstable realm on the edge of chaos: the complexity revolution, have noted that its most radical implications are being overlooked. Those implications are at the level of the challenges posed to an epistemology and ontology welded to stability. What is missing is a philosophy sufficiently powerful to take cognisance

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of these explorations. I have tried to suggest that one place to look for such a philosophy is Deleuze and Guattari's critique of organisation, the inverted vitalistic philosophy of matter that is produced by their work. What I have initiated then is an examination of that "whole history on the level of the membrane or limit" (Deleuze and Guattari 1980/87 67/51) that DeleuzeGuattari seek to uncover.

The problem of morphogenesis introduced above is part of a minor, philosophically aware biology, and it is one that sits well within the range of DeleuzeGuattari's scanning of critical problems in the natural sciences. In a sense, it is something of a testcase for their theoretical work, encapsulating as it does, so many of the key issues in their discernment of problematics. Morphogenesis, with its hylozoic, expressive collapsing of the categories of matter and form into those of matter and intensity. As such it acts as a condensation of the questions that index the critique of hylomorphism as a basic structure for scientific and philosophical practice. Simultaneously it poses severe difficulties for molar, zoocentric biology predicated upon the species.

In a paper entitled 'Visual Models of Morphogenesis' Przemyslaw Prusinkiewicz notes that two types of approach can be discerned in the study of morphogenesis (the development of patterns and forms in the domain of the living)

1. the first tradition following d'Arcy Thompson, is where one would locate figures such as Rosen, in which form is taken as a derivative of growth: "It is obvious" Thompson writes "that the

form of an organism is determined by its rate of *growth* in various directions; hence rate of growth deserves to be studied as a necessary preliminary to the theoretical study of form, and organic form itself is found, mathematically speaking, to be a *function of time*" (Thompson 1952 79).

2. the second approach, deriving from Turing, focuses on the flow of substances through a medium, in which "the systems considered consist of masses of tissues which are *not growing*, but within which certain substances are reacting chemically, and through which they are diffusing" (Turing 38).

Evidently, this first tradition is one that exhibits, what Deleuze had identified in his work on Spinoza as intensive quantity, Spinozist individuation is "neither qualitative nor extrinsic, but quantitative and intrinsic, intensive" (Deleuze 1968/92 181/197). That this principle is critical to Deleuze and Guattari's critique of biology, and that it brings them into direct relation with the former morphogenetic tradition, is evidenced by the following citation, a key statement of their comprehension of morphogenetic growth. Occurring in the middle of one of the most intricate, iconoclastic, conceptually fertile and at the same time rarely considered passages in *A Thousand Plateaus*, this passage makes clear that questions of individuation in the natural world from the crystal to the organism are as central to Deleuze and Guattari as they are to Simondon. Moreover it demonstrates that these questions are not to be treated as metaphor, but rather as distillations, and pragmatic deployments, of transversal concepts derived from a range of diverse disciplines and rendered immanently functional in defined

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milieus:

> When content and expression are divided along the lines of the molecular and the molar, substances move from state to state, from the preceding state to the following state, or from layer to layer, from an already constituted layer to a layer in the process of forming, while forms install themselves at the limit between the last layer or last state and the exterior milieu. Thus the stratum develops into epistrata and parastrata; this is accomplished through a set of inductions from layer to layer and state to state, or at the limit. A crystal displays this process in its pure state, since its form expands in all directions but always as a function of the surface layer of the substance, which can be emptied of most of its interior without interfering with the growth. (Deleuze and Guattari 1980/87 78/60)

Schizoanalytic questions concerning the limit are cemented into a highly complex, mobile and immensely powerful abstract machine, or minor philosophical assemblage. The elements contributed by Margulis and Simondon are taken up as finely honed cutting edges of deterritorialisation aimed at symbiosis and individuation respectively, the nomos and transduction (transcoding). But to unleash its full potential requires carefully delineated operations. These operations do not amount to an abdication of philosophy to the supposedly superior clarity of concepts forged in the implementations and encodings of the physical sciences, the implementation of empirical practices, the

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encoding of material phenomena in physical law. Nor can they be contained by the Kantian prescription of the limits of scientific theorisation. Instead, the full weight of DeleuzoGuattarian pragmatics is directed at the production of transversal concepts which dislodge, and then follow, singularities produced in a range of cases, across the strata, always governed by a pursuit of materiality and its generative diagrammatisation, this pursuit is always creative, for having liberated philosophy from the tyranny of the true, its object is emergence, the creation of the new. The meaning of the *heterogenesis* of the concept becomes particularly pertinent at this point, as it is the basis for philosophy's dignity and autonomy, it is no longer the servant of science nor the interpreter of art, it regains its own creativity. The convergence that is run here is between parallel theses in minor disciplines, a minor science and a minor philosophy. It is in this sense then that at the micrological level the structure of *a* philosophy, its production of affects and concepts, and at a macrological level, the history, and this term will be a misnomer, of philosophy and that of the relationship between philosophy and its outsides (nonphilosophy, art, science) is cognised as "becoming, not history; it is the coexistence of planes, not the succession of systems" (Deleuze and Guattari 1991/94 59/59). Hence philosophical time is a time of coexistence, a time that superimposes the before and after in a "stratigraphic order" (Deleuze and Guattari 1991/94 58/59). As Isabelle Stengers and Ilya Prigogine write of the dispute between Bergson— and his rejection of "homogeneous and independent time" in favour of "many different rhythms which, slower or faster, measure the degree of tension or relaxation of different kinds of consciousness" (Bergson 1991 207)— and Einstein— who had sought

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to eliminate time from physics altogether— on the questions of the existence of a plurality of durations, of time and its irreversibility, "[e]very complex being is composed of a plurality of times, connected together by way of subtle and multiple articulations" (Stengers 1997c 42). Indeed, prioritised by Deleuze and by Guattari (see in particular the latter's *Cartographies schizoanalytiques*) are geographic as opposed to historical principles, the multidimensional complexities of topology and cartography against the simplistic rigidity of monodimensional, oppositional or dialectical schemas.

Che al vero filosofo ogni terreno è patria[61]

Deleuze and Guattari's work is replete with references to the sciences of the earth, from the continually reiterated demands for a new earth in both *Anti-Oedipus* and *What is Philosophy?*, to the great concepts of de- and reterritorialisation, stratification, folding, and sedimenting, culled from geomorphology and geology, Guattari's cartographic strategies, and the emphasis on the mapping of milieus in the joint works— the insistence that "we are not even doing history [...] we are trying to make maps of regimes of signs" (Deleuze and Guattari 1980/87 149/119), and of course the plateau '10,000 BC: Geology of Morals (Who Does the Earth Think It Is?)'. Arnaud Villani, as we have seen, describes *A Thousand Plateaus* as containing a physical geography, and one of the chapters of *What is Philosophy?*, an exceptionally programmatic chapter, calls for a geophilosophy which puts "thought into a direct relationship with the earth" (Deleuze and Guattari 1991/94 82/85). This adoption of a tellurian emphasis, a geomorphism, is

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deployed to deliberate pragmatic ends, as a key tactical move. Principally it serves as a means to ward off "the slightest risk [...] the slightest interpretation" (Deleuze and Guattari 1980/87 392/318) of anthropomorphism. To make philosophy a geophilosophy is a great affront to the way in which Deleuze had been taught the discipline (as he reminds us in *Negotiations*), that is as the *history* of philosophy. It is also of course a rejection of the dominant forms of philosophy adhered to by Deleuze and Guattari's contemporaries, whether they be Heideggerian or Hegelian, which remain avowedly historicist in their various narratives of the unfolding of the concept, "inasmuch as they posit history as a form of interiority in which the concept necessarily develops or unveils its destiny" (Deleuze and Guattari 1990/94 91/95). This transformation of philosophy, Deleuze and Guattari write, is imagined in much the same way as Fernand Braudel's transformation of history itself, into a geohistory. Braudel's work is concerned with "this rich zone, like a layer covering the earth [...] material life or material civilisation" (Braudel 1985 23), and his questions always ask about the 'where', the 'what', and the 'how many' (recall our comments above on Bergson and multiplicity') rather than the 'when', he talks of history in terms of "numbers, lines of force, repetitions and typologies" (Braudel 1985 92), and of certain events, here, the coming of the Nomads, as an attraction towards a "cyclonic zone, an enormous vacuum" (Braudel 1985 96), and of towns as "electric transformers [...] restrictive and distinctive geometries" (Braudel 1985 479, 491). For both DeleuzeGuattari and Braudel, the geographical is associated with the irreducibility of the contingent as opposed to the cult of necessity harboured by the historical (Deleuze and Guattari 1990/94 92/96), with

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the currents of winds and oceans, the shearing points of ice masses, the speed of overflowing lavas, and shifting magmas. It is this same contingency that provides the character of Deleuze and Guattari's becomings, the meetings of the heterogeneous, hence their association of the concept with becoming, and so with geography. They write, "becoming is the concept itself. It is born in history, and falls back into it, but is not of it. In itself it has neither beginning nor end but only a milieu. It is thus more geographical than historical." (Deleuze and Guattari 1990/94 106/110).

In the next chapter we turn to a critique of a work that seeks to pursue the meeting of DeleuzeGuattari's geophilosophy and Braudel's geohistory.

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chapter iv

Schizoanalytic Materialism and Marxism: 1000 Years or 1000 Plateaus?

> In this way the boundless refuse of activity pushes human plans— including those associated with economic operations— into the game of characterising universal matter; matter, in fact, can only be defined as the *nonlogical difference* that represents in relation to the *economy* of the universe what *crime* represents in relation to the law.
>
> (Bataille I/1985 319/129)

> Hence it happens that one who seeks the true cause of miracles, and is eager, like an educated man, to understand natural things, not to wonder at them like a fool, is generally considered and denounced as an impious heretic by those whom the people honor as interpreters of nature and the Gods. For they know that if ignorance is taken away, then foolish wonder, the only means they have of arguing and defending their authority, is also taken away.
>
> (Spinoza, 1985 E I appendix)

In the 'Conclusions and Speculations' to his *A Thousand Years of Nonlinear History* (De Landa 1997 257–74) Manuel De Landa describes his book as offering a "historical survey of these flows of 'stuff', as well as with the hardenings themselves" (De Landa 1997 259). The stuff referred to is broken down in the structure of the book into three sections, each corresponding to one of Gilles Deleuze and Félix Guattari's three major strata, that is, the "physicochemical, organic and anthropomorphic" (Deleuze and Guattari 1980/87 627/502), which for De Landa are taken to be 'Lavas and Magmas', 'Flesh and Genes', and 'Memes and Norms'. The hardenings, or elsewhere 'slowings down' of this stuff, or matter-energy in movement, take different forms on the three strata: the formation of features of the geological landscape by the hardening of the eponymous lavas and magmas; the coagulation of the flows of biological matter, "biomass, genes, memes and norms" (De Landa 1997 258) into human and animal bodies; the extrusion of languages from the "momentary slowing downs or thickenings in a flow of norms", and the creation of institutions considered as "transitory hardenings in the flows of money, routines and prestige" (De Landa 1997 259). A further qualification is in order before we go any further: the hardenings to which flowing matter is subject come in two different forms, forms named by Deleuze and Guattari as *strata* and *self-consistent aggregates*, and renamed, it would appear quite arbitrarily, by De Landa as 'hierarchies' and 'meshworks'.

In executing this analysis De Landa builds a conceptual armature out of a weave of two elements: first, a historical perspective closely patterned on Fernand Braudel's magisterial *Civilisation and*

Capitalism: 15th-18th Century, the fine grain of the micrological secured by the perspective of the *longuedurée* and an attention to the cycles and flows of economic life: Kondratieff waves seen through the lenses of nonlinear dynamics. Second, and perhaps more important here is De Landa's extensive engagement with key concepts drawn from the two volumes of Deleuze and Guattari's *Capitalism and Schizophrenia*, in particular from the second volume, *A Thousand Plateaus*. What would appear to be most in accord with the approach to these concepts argued for in this thesis, is De Landa's attention to the pragmatic emplacement of the concepts in an empirical study, the attempt to lodge them on a specific stratum. The DeleuzoGuattarian concepts with which De Landa is most concerned are those of *De-* and *restratification*, *nonorganic life*, the *Body without Organs*, and the *machinic phylum*. The result of the fusion of these two elements, allows one to read *A Thousand Years* as a sustained attempt to demonstrate the validity of Guattari's claim in his article 'The Plane of Consistency' that "what makes the thread of history— from protohistory until the scientific revolutions— is the machinic phylum" (Guattari 1977 315). In a certain respect *A Thousand Years* presupposes a familiarity with De Landa's first book, *War in the Age of Intelligent Machines* as it is there that he first detailed his understanding of the way in which the machinic phylum is imbricated with human, and in particular military, history. De Landa contends that it is only by detailing this relationship that a genuinely *materialist* history can be written.

Lurking not too far beneath the surface of De Landa's work is an unexpected agenda, one most clearly revealed in his spoken

presentations of his research: that is an unmitigated attack upon, and rejection of, Marxism as a tool of historical analysis, it is significant in this respect that the only overt criticism of Deleuze and Guattari given in *A Thousand Years* is precisely for their commitment to Marxism:

> [d]espite the fact that their philosophical work represents an intense movement of destratification, Deleuze and Guattari seem to have preserved their own stratum, Marxism, which they hardly touch or criticise (De Landa 1997 331).

The problem with this attack is principally this: commitment to Marxism on Deleuze and Guattari's part is by no means accidental or liminal, it plays, I want to suggest, a privileged role amongst the cornucopia of sources from which they draw. Indeed it plays a critical role in organising a key set of concepts, most dominant in *Capitalism and Schizophrenia*. such that the substantial third chapter of *Anti-Oedipus*, 'Savages, Barbarians and Civilised Men' can barely be understood, is scarcely comprehensible, without reference to Marx's *Grundrisse*, the chapter is in fact best read as an attempt to rewrite and expand certain fundamental themes of the *Grundrisse*, and in particular that section of it that deals with 'Precapitalist Economic Formations'. At the same time, this chapter is preoccupied with a debate central to Marxist theory, that of the presence or absence of teleology in Marx's account of human history. Marx himself was resolutely clear in his opposition to any semblance of teleology identifying it as a "metaphysical spectre" (Marx and Engels 1976 59),

writing that "history is nothing but the succession of the separate generations [...] This can be speculatively distorted so that later history is made the goal of earlier history [...] thereby history receives its own special goals and becomes a 'person ranking with other persons' (to wit: 'self-consciousness, criticism, the unique', etc), while what is designated with the words 'destiny', 'goal', 'germ', or 'idea' of earlier history is nothing more than an abstraction from later history" (Marx and Engels 1976 59). Such is Marx's consistently held position on this subject. Let us be perfectly clear about this: impositions of telos, necessary progress on the course of history imputed to Marx or Marxism are distortions introduced by, on the one hand, Stalinists, who had political reasons to do so, and later Marxists who failed to understand the radicality and depth of Marx's critique of Hegel (as is well known Marx sharply disassociated himself from much of the thought that claimed to be produced under his aegis). All of the latters' categories are for Marx irretrievably theological; and, on the other hand, by opponents of any form of Marxism. As Marx makes clear, in his analysis of the "ruling class and the ruling ideas", and of ideology in general, and as we have repeatedly shown in this thesis, Deleuze and Guattari concur in their analysis of State science, teleological ideas are of necessity cast in the same mould as theological ones. This philosophical event is called *Hegel ou Spinoza*[62], and in it Hegel is a functionary of the State, and Spinoza its most virulent critic. It is on these grounds that we can "regard Spinoza as Marx's only direct ancestor, from the philosophical standpoint" (Althusser and Balibar 1970 102)[63]. Understood in this way it is possible to reconceptualise the political stakes invested in Deleuze's continual prioritisation of Spinoza over Hegel. For all of these

reasons, any project that attempts to account for social history in a way that claims some fidelity to Deleuze and Guattari is ultimately doomed if it pretends that Marxism is an irrelevance or a nostalgic affectation hung onto by disappointed *soixante-huitards*. Deleuze and Guattari's attempt to understand capitalism as a voracious, ever expanding, all consuming producer of axiomatics is incomprehensible without reckoning with the event of Marx. De Landa states that there are "at least two things" that prevent him from subscribing to Marxist concepts, these are "the labour theory of value which Piero Schraffa [sic. this should read 'Sraffa', EA] has clearly shown to be a redundant part of Marxist economics [...] and the built-in teleology in the traditional Marxist periodisation of history" (De Landa 1997 281). Both of these are, for reasons that I shall demonstrate entirely insufficient and function as the crudest caricature. Whilst it is true that Sraffa launched an attack on the labour theory of value and by so doing exited from Marxist economics it is also the case that the one need not lead to the other. Support for the labour theory is by no means a prerequisite of Marxism, indeed there is a long tradition within Marxism (one that starts arguably with Marx) that also rejects it. A contemporary, and virulently Marxist, argument in favour of rejecting the labour theory is presented by Antonio Negri under the rubric of the real subsumption of society to capital. For Negri the redundancy of the labour theory of value is tied "to a previous and out-dated organisation of labour and accumulation" and goes on to write that a major shift has taken place in the political landscape of the developed world (or the core) and that problems exist for a politics maintained in the name of a hypostatised industrial proletariat. Negri assesses his project as the bringing of

two traditional thematics, the question of the validity of the law of value, and the development of the transition between socialism and communism, into contact with the new phase of political history: the subsumption of the entire society under capital in the process of capitalist accumulation, and therefore the end of the centrality of the factory working class as the emergence of revolutionary subjectivity (Negri 1996a 149).

It is the conjunction of "post-Fordism as the principal condition of the new social organisation of labour and as the new model of accumulation, and post-Modernism as the capitalist ideology adequate to this new mode of production" that together form the assemblage named by Negri "the *real subsumption* of society within capital" (Negri 1996a 154). De Landa is constitutionally incapable of recognising this because his understanding of Marxism is as a set of incontrovertible empirical truths rather than as a method. Félix Guattari lucidly points out that it is Marx in the *Grundrisse* who "insisted on the absurdity and the transitional character of a measure of value based on work time" (Guattari 1996 205), the simple reason for this is that as Marx recognised, there is a growing discrepancy between the machinic, intellectual and manual components of labour, such that "Human time is increasingly replaced by *machinic time*" (Guattari 1996 207). A crucial factor in this of course is the transition of the economies of Europe, Japan, and North America from being based on the production of physical commodities to the predominance of the information and

service industries. De Landa's second reason for rejecting Marxism ie. that it is beholden to a predetermined teleological progression of stages is simply, and I return to this point later, laughable. Such an argument is a fatuous irrelevance that can only be countenanced seriously in a culture where Marxism's image has been so thoroughly tarred with the brush of Stalinism that it is possible to present it in such a caricatured form.

Unevenness and Heterogeneity

De Landa's book then is significantly marred by the total inadequacy of this attack, and it is upon this that I wish to concentrate. The Marxism that he professes to reject is one entirely stripped of subtlety, one ignorant of the extensive debates that have raged within Marxist theory on the genesis of different modes of production, and of the concomitant literatures on 'stageism', on the origins of capitalism (the various positions in this debate are collected in the volume *The Transition from Feudalism to Capitalism*, and assessed in Aidan Foster-Carter's important survey article 'The Modes of Production Controversy'), the nature of the world system (a concept cursorily rejected by De Landa in classic postmodernist terms as being a "great master concept, the great homogenisation", De Landa 1997 267), and most notably the concept of combined and uneven development. It is this latter idea which plays a crucial role in DeleuzeGuattari's reading of Marx, in particular in *Anti-Oedipus*, a text, the sense of which De Landa has, in recent spoken presentations[64], demonstrated an apparent and curious ignorance. Marx explicitly discusses the

continued existence of the symptoms of a previous social form in a period when its material base or 'cause' has long vanished: "Alongside the modern evils, we are oppressed by a whole series of inherited evils, arising from the passive survival of archaic and outmoded modes of production, with their accompanying train of anachronistic social and political relations. We suffer not only from the living, but from the dead. *Le mort saisit le vif!*" (Marx 1976 91). So much for linear causality in Marx. Rather we have here the presaging of a complex view of involution that Deleuze and Guattari describe as "reverse causalities that are *without finality* but testify nonetheless to an action of the future on the present, or of the present on the past", and note this well, "it is these reverse causalities that shatter evolution" (Deleuze and Guattari 1980/87 537/431). On this latter point De Landa suggests that only *his* model, nominally derived from the application of nonlinear dynamics to economic theory, can account for a situation such as that in which one sees the existence of an urban agglomeration evincing nominally capitalist relations of production surrounded by a rural expanse dominated by feudal relations. It is however precisely such assemblages of heterogeneous elements that are accounted for by the concept of combined and uneven development (see for example Marxist analyses of the situation in Tsarist Russia on the eve of the 1917 Revolution, in which one finds large urban centres, Moscow and St. Petersburg, characterised by advanced capitalist relations of production including the largest factories then extant in Europe— Trotsky notes for example that, in 1914 in the US 17.8% of the workforce was employed in factories of 1000 workers or more, in Russia the corresponding figure was 41.4%— surrounded by a countryside in

which social relations were entirely feudal, peasants were still, in Gogol's phrase, and as detailed in his novel of the same title, *dead souls* that is chattels bound to, and sold with, plots of land rather than being free agricultural labourers selling chunks of variable capital embodied in their labour, the existence of serfdom was a *de facto* reality into the early 1920's even though it was juridically annulled in the reforms of 1861). Here, then is the classic statement of the principle: "Unevenness, being the most general law of the historic process, reveals itself most sharply and complexly in the destiny of the backward countries [...] From the universal law of unevenness thus derives [...] the law of *combined development*— [...] an amalgam of archaic with more contemporary forms" (Trotsky 1980 6). This law finds its direct correlate in DeleuzeGuattari's theorem eight of generalised double deterritorialisation which states that "one assemblage does not have the same forces or even speeds of deterritorialisation as another; in each instance, the indices and coefficients must be calculated according to the block of becoming under consideration" (Deleuze and Guattari 1980/87 377/307). It is to the mechanisms by which these grotesque dissymmetries are generated between different economic zones by the Capitalist axiomatic that Samir Amin has dedicated a major part of his project. Amin's work, we should note, plays a critical role in Deleuze and Guattari's account of contemporary Capitalist axiomatics in the thirteenth plateau '7000 BC: Apparatus of Capture'. This account is one that Antonio Negri has described as becoming evermore prescient, and consequently he has suggested, the time of *Mille Plateaux* is still in the future, it is in the process of becoming, and it is "Becomings,

becomings-animal, becomings-molecular, [that, EA] have replaced history, individual or general" (Deleuze and Guattari 1980/87 200/162). Whilst one may critique Amin's proposals for escaping from the progressive impoverishment generated by the *development of underdevelopment* which is contingent upon these asymmetrical relations as being ludicrously idealist. Put briefly, Amin proposes and advocates a model of autarchic economic development which directly opens onto and supports the third-worldist ideology rampant in the 1970's, one cannot help but find his general thesis, which serves as a caustic rejoinder to the patent inanities of the bourgeois faith in the generosity of the trickle down effect played out on a global scale, to be convincing[65].

The Internal Limit. Spinoza

'Integrated World Capitalism', to use Alliez and Guattari's terminology[66] and contrary to de Landa's claims, is never characterised in Marxist theory as a smooth space of homogeneous relations, but rather is marked by the radical coexistence of unevenness at every level of investigation. Marxist economics at its most powerful, is committed to an anti-Platonism precisely in the sense that it rejects the possibility of the existence of pure forms, an evolutionary procession of stages, it is indeed predicated upon the existence of noncapitalist relations, the global axiomatic of capitalism, to quote Deleuze and Guattari, has "no laws but immanent ones. It would like for us to believe that it confronts the limits of the Universe, the extreme limit of resources and energy. But all it confronts are its own limits" (Deleuze and Guattari 1980/87

579/463) so that according to the "deepest law of capitalism: it continually sets and then repels its own limits, but in so doing gives rise to numerous flows in all directions that escape its axiomatic" (Deleuze and Guattari 1980/87 590/472). In more orthodox Marxist terms, Capitalism "is born and develops within the framework of a pre-capitalist mode of production" (Mandel 1977 125). The model that De Landa projects onto Marxism is one that the Trotskyist economist Ernest Mandel has diagnosed as "isolat[ing] 'pure' forms which in real life are combined, or have more or less degenerated. To reduce economic history to a series of 'stages' or to the successive appearance of 'categories' is to make it excessively mechanical, to the point of rendering it unrecognisable [...] The Marxist conception of economic and social change has no place for any fatalism or automatism. No phase of social organisation 'must' necessarily succeed another" (Mandel 1977 91). As such the development of Capitalism, for both Deleuze and Guattari and for Marxism, is predicated upon the existence of the *uneven development* of different sectors, that is to say, it is an axiom of Capitalism, a structural necessity. This difference has a structure demonstrating *selfsimilarity* on each and every scale from the global (between hemispheric sections), to the national (between regions), to the local (between and within, for example, the different areas of a city). This proposition takes the form of the *internal limit*, "the South is an abstract term designating the Third World or the periphery; and even that there are Souths or Third Worlds inside the centre" (Deleuze and Guattari 1980/87 585/468). The problem with De Landa's position as staked out in this book, is that whilst he claims to be consistent with DeleuzeGuattari's project he has in fact chosen to ignore or reject an

absolutely fundamental part of their work, a part of their work to which the bulk of *Anti-Oedipus* and at least two plateaus of *A Thousand Plateaus* is dedicated, and that is their account of Capitalism's spread across the globe in terms of "(t)he four principal flows that torment the representatives of the world economy, or of the axiomatic, [which] are the flow of matter-energy, the flow of population, the flow of food, and the urban flow [...] the axiomatic never ceases to create all of these problems, while at the same time, its axioms, even multiplied, deny it the means of resolving them" (Deleuze and Guattari 1980/87 585/468). This account is explicitly given in terms derived from, and consistent with, the most sophisticated Marxist accounts of the functioning of the Capitalist world machine or axiomatic, and Deleuze and Guattari's twin volumed *Capitalism and Schizophrenia* is nothing else if not a sustained engagement with Marx. There seems to this reader to be no possible way around this without committing the most grotesque misrepresentation of their work[67]. Hence, whilst the critique of, and engagement with, Freud in the two volumes of *Capitalism and Schizophrenia* is often remarked on, the equally important development of Marx, the attempt to think a Marxism, is overlooked. The entire point of the already remarked on third chapter of *Anti-Oedipus* is to secure an account of universal history which will escape its Hegelian determination as a theology (teleology) by seizing hold of "the conditions of its contingent, singular existence, its irony, and its own critique" (Deleuze and Guattari 1974/83 324/271). Deleuze and Guattari's work then can be seen as having far more to do with that particular French school of Marxism, which inspired by Althusser, sought to develop a Marxism inspired by Spinoza rather than by Hegel. Why? "Because

Spinoza is the founder of an absolutely original conception of *praxis* without teleology, because he thought the presence of the cause in its effects and the very existence of structure in its effects and in presence" (Negri 1994/95 125/12). One can only agree with Fredric Jameson's judgement on this: "Deleuze is alone among the great thinkers of so-called poststructuralism in having accorded Marx an absolutely fundamental role in his philosophy" (Jameson 1997 395).

Machinic Critique

To return to this question of the nature of the Capitalist machine we must ask what, in this sense, in the sense understood by DeleuzeGuattari, is a machine? In beginning to address this question we must be quite clear that we are in a way approaching one of the most distinctive elements of their thinking and that is precisely their attack upon one of the great structuring dualisms of Western thought, that between mechanism and vitalism, and their transcending of the split with the proposal of a great machinic thinking, a machinism[68], "which is something else entirely: it designates every system that cuts off fluxes going beyond both the mechanics of technology and the organisation of the organism, whether it be in nature, society, or man" (Guattari 1995 99). Deleuze and Guattari go to great lengths to stress that what is being proposed here is in no way subject to the great dispute between mechanism and vitalism alluded to above, they are not alone in this for the biologist Robert Rosen too makes clear that there is a third way passing beyond these two immutable alternatives, for Rosen it is called complexity, he notes that biology must— and indeed for some biological

scientists, notably Rosen, Margulis and Kauffman this is a basic starting point— move beyond mechanism, and the "alternative is not vitalism, it is complexity" (Rosen 1991 262)[89]. Deleuze and Guattari make much of this set of distinctions, recall the section of *Anti-Oedipus* entitled 'Beyond vitalism and mechanism', a beyond that returns us to the opening of this section: with the machinic phylum.

In the present circumstances it will have to suffice to note that the machine in DeleuzeGuattari's work is by no means something metaphorical (something of which de Landa gave an exemplary demonstration in his previous book's discussion of Sadi Carnot's discovery of the abstract diagram in relation to his research into the construction of a heat engine, De Landa 1994 141). The machine denotes something that is "constituted from the moment there is communication between two portions of the outside world that are really distinct in a system that is possible although less probable" (Deleuze and Guattari 1974 466); it is axiomatic then that a machine is composed of heterogeneous elements and also that its definition goes way beyond the merely technical. The analysis of the machine is extended towards, for example, its historicopolitical deployment in Deleuze's article on 'Contrôle et devenir' focusing on the intimacy between the changing nature of the abstract diagram through time and the different societal forms in which it is embedded: think of the relationship between clockwork and the absolutist state, disciplinary societies and thermodynamic machines, "control societies [...] with information technology and computers" (Deleuze 1990/95 237/180). Pierre Lévy has extended some of these considerations in his account of

the virtualisation of the tool and his demonstration that "material instruments and artifacts provide us with a large number of concrete and socially shared models, with which we can metaphorically apprehend more abstract phenomena or problems" (Lévy 1998 125). This machinic account is one that is philosophically and pragmatically rigorous, one that operates according to an expanded logic of general economics *to the scale of the universe*. Intimately connected to the DeleuzoGuattarian concept of the machine is that of machinic enslavement, now the Marxist concept of the machine obviously has a direct correlate to this in that of exploitation, but anything even vaguely resembling such a concept is entirely absent in De Landa, essentially he elaborates a concept of capitalism (and indeed of all social regimens) that is devoid of conflict either endemic or accidental, he leaves therefore no space for politics, class or otherwise, and ultimately presents an entirely theoreticist position devoid of praxis, devoid of any conceivable pragmatic implementation or implication. The ultimate reason for the absence in De Landa of an understanding of conflict or exploitation lies in his utter misunderstanding of the theory, crucial to Marxian analyses, of surplus-value, which is as Antonio Negri notes "the centre, now and always, of Marxist theory" and the key to demonstrating the "productive materialisation" of its method (Negri 1991b 60). Hence the deformations and deployments that the theory of surplus value undergoes in *Capitalism and Schizophrenia* (principally as surplus value of code, and in the distinction between machinic and human surplus value with the concomitant distinction between machinic enslavement and social subjection) constitutes a critically important element in the DeleuzoGuattarian conceptual assemblage.

The transfiguration of the theory of surplus value into one of surplus value of code is to be understood as the principal mechanism of DeleuzoGuattarian thought. A mechanism cutting across the three principal strata, as follows: "Each chain captures fragments of other chains from which it 'extracts' a surplus value, just as the orchid code 'attracts' the figure of a wasp: both phenomena demonstrate the surplus value of a code" (Deleuze and Guattari 1980/87 47/39). The ramifications of this transfiguration are wide, because in DeleuzeGuattari's hands the concept of the surplus value of code, the capture of code fragments, has two principal results. First, it gives the principal mode of understanding deterritorialisation processes, they are indeed functionally identical in the analysis of the flows of capital in the substantial third chapter of *Anti-Oedipus* (as well as in Deleuze's weekly seminar at the University of Vincennes in the 1970's)[70], which is, as we have seen, principally an engagement with the *Grundrisse* and in which we witness the "great movement of decoding or deterritorialisation" (Deleuze and Guattari 1974/83 308/259). The second fundamental result of the analysis of the surplus-value of code is to produce the principal mechanism whereby philosophy avoids representation (the goal of a nonrepresentational thought): "the wasp in turn deterritorialises by joining with the orchid: the capture of a fragment of the code, and not the representation of an image" (Deleuze and Guattari 1975/86 26/14, trans. altered). Lacking a theory of surplus value and consequently one of machinic surplus value, De Landa has no means of constructing a concept of conflict, neither one of class nor one of minorities and majorities, consequently his work, whatever it's other merits, and contrary to its author's claims,

constitutes not a development of, but a definitive break with DeleuzeGuattari's theoretical innovation, which, whatever else it is, has always been, as Deleuze reminds us, Marxist (Deleuze 1990/95 232/171)[71].

De Landa makes a number of grand claims for the originality, perspicacity and cutting edge nature of his work, however throughout this thesis I want to demonstrate that far more effective analyses of the kinds of phenomena that preoccupy De Landa exist; the tradition that I am thinking of here is that deriving from the genuinely revolutionary work of the long neglected Russian biogeochemist Vladimir I. Vernadsky whose 1926 *magnum opus*, *The Biosphere* has only this year been translated into English in its entirety[72]. It is to Vernadsky and under his explicit and cited influence, Bataille in h*is* *Accursed Share* (and *not*, in spite of his protestations to the contrary, De Landa) that we owe the complimentary *modern* conceptions of the earth as an open dynamic system subject to flows of matter and energy (precursor to Lovelock and Margulis' *Gaia* theory), and that of matter as living, the prodigious realm of nonorganic life spoken of in *A Thousand Plateaus* and constantly affirmed and reiterated throughout Deleuze's work from *Bergsonism*, to the two books on *Cinema*, to *The Fold*. It is this theme that runs like a transversal spine throughout the invention of the bastard line of philosophy, from Bruno, to Leibniz, Nietzsche and Bergson all united under the arch of a stripped down Spinozism directed towards the empirical discovery of haecceity, singularity, number and intensity in and of matter. Deleuze and Guattari's concentration on a "matter that is no longer a chaos to

conquer and organise, but *matter moving in continuous variation*" (Deleuze and Guattari 1980/87 419/340 trans. altered, EA) is given in a process of creative discovery. Such a discovery is in turn an opening of philosophy to the enormity of its *altneu* task of confronting a matter no longer subject to its expulsion from the realm of the living, beyond theological and hylomorphic constraint, no longer subject to the determinations of theological philosophy. It is a granting to, and a gaining by, philosophy of a new set of objects, beyond the frozen rigidities of philosophical dualisms, a philosophy, not of the inert and finished, but of "unformed and unstable matters [...] flows in all directions [...] free intensities or nomadic singularities [...] mad or transitory particles" (Deleuze and Guattari 1980/87 54/40). A philosophy of processes rather than goals, of becoming rather than being. The discovery of a new Earth.

In the next chapter we turn our attention to the production of this vision in the interstices between Deleuze and a thinker about whom he rarely writes, but whom we shall argue makes a crucial contribution to the vital intellectual tradition of which Deleuze is just the most recent great representative— Giordano Bruno, the apostate Dominican of Nola.

Schizoanalytic Materialism

chapter v

Elaborations on Materialism Between Bruno and Deleuze

> The general framework seems at first to be an animist, hylozoist, pre-Socratic one. But vitalism finds itself inverted at the very moment that it is asserted, for it does not present itself either as an envelope of the real, or as a conception of the world, nor as a force which is not distinct from the production of the real, whether natural or historical, but as all of these elements at once, placed at the service of the production of singularity, of the emergence of singularity
>
> (Negri 1995 99)

> Life is not only everywhere, but souls are everywhere in matter
>
> (Deleuze 1988/93 15/11)

> *A Thousand Plateaus* [...] remains forever open is constantly being reopened through an amazing will to theorise, and with a violence worthy of heretical proclamations.
>
> (Negri in Deleuze 1990/95 232/171)

> What is it that leads most people to slander matter as they do? In the end, it is only the modesty of matter that is so offensive to them. But this very composure proves that something dwells within matter, something of that original essence, of the germ and primordial material of existence, something that is passive on the outside but is in itself the purest spirituality
>
> (Schelling 1997 150)

Chasm

There is a sense shared by many commentators on Deleuze and Guattari's work that their power "stems from the fact that [they] succeed in detaching themselves from Parisian temporality" (Land 1993 66)[73]. The question to be pursued in this case then is, in what time can Deleuze and Guattari best be located? The implication made here is that Deleuze, principally, be located in the period prior to the invention of Kantian critique, and hence prior to the conventional location of the birth of modernity with Kant and the *Aufklärung*. That is on the cusp of the Renaissance and the Baroque. The towering figure of this period is without doubt, Bruno, and in these theses it will be shown how, on a number of crucial issues, lines can be drawn directly between him and Deleuze. These lines descend from those elements of Bruno's thinking that are most heterodox to those in Deleuze that are most untimely. The questions to be activated here are: the truth of the relative; the invention of haecceity as a concept of individuation; the doctrine of active matter and the dissolution of the hylomorphic glue that this entails; ontology of eternal flow; concept of the universal *nous*, immanent in the universe; revised vitalism; hylozoism. A chasm can be opened that separates Deleuze from his contemporaries, it lies in his immersion in a conceptual world that is resolutely, pre-Kantian[74], and in the identification of Deleuze's most radical and distinctive concepts as being clearly adumbrated in Bruno. Principal in this regard is the rejection of the hierarchy of being (a rejection initiated by Cusa and decisively developed by Bruno), in favour of philosophy as survey of a flat zone of immanence, univocal ontology: "Immanence [...] implies a

pure ontology, a theory of Being in which Unity is only a property of substance and of what is. [It] requires as a principle the equality of being, or the positing of equal Being [...] not defined by their rank in a hierarchy" (Deleuze 1968/92 157/173). Recall here Deleuze's succinct letter to Badiou, which read in its entirety: "immanence = univocity" (Badiou 1998 28).

For critics of Bruno like Frances Yates, who is, as some have pointed out, the last in a long line of his Catholic detractors, Bruno is to be identified as a heretical priest preoccupied with the founding of a new religion or cult, a neo-Egyptianism (hence her insistence upon identifying him with Rosicrucianism, the precursor of Free Masonry, which does draw for its rituals principally upon a language derived from Egypt). Following Deleuze and Guattari however, it is clear that Bruno can be read instead, with his absolute insistence upon immanence, flatness, the spiral, and his opposition to hierarchy, as being committed to philosophy understood in part as naturalism. "Whenever there is transcendence, vertical Being, imperial State in the sky or on earth, there is religion; and there is philosophy whenever there is immanence" (Deleuze and Guattari 1991/94 46/43). It is imperative in setting up such a reading of Bruno that one avoids the sickness that Antonio Negri, in his magisterial reading of Spinoza, *The Savage Anomaly*, has diagnosed as afflicting philosophical historiography, that of "orienting the alternatives toward the past" (Negri 1991a xxi). So rather than offering "a study in cultural genealogies" what is at stake here is "a material genealogy of conditions and functions of thought", this is not merely the setting of a thought within its sociopolitical context, such is

all that can be done by standard materialist accounts, what are engaged in Negri's proposed superior materialism are the contours of a conceptual work's constitutive-productive profile: thought rendered as a material force, the interweaving of the linguistic with the human historical planes alluded to above. For Negri the "liberation of a cumbersome past" will be worthless "if it is not carried through to the benefit of the present" and critically, "to the production of the future". Bruno, treated in this way becomes the conceptual architect of such a future. The point then is not to ask such questions as "What does Deleuze say about Bruno?" or "What is the influence, direct or other wise, of Bruno on Deleuze?", but rather to examine in a non-personalist fashion the force or life of concepts, the degree to which they become material forces. The mode then of this investigation is resolutely non-Kantian in its refusal to be bound by subjectivity; rather, it is concerned with the force of the concept as event, with conceptual personae (Deleuze and Guattari 1991/94 chapter 3).

Eternal Return of the Machinic Phylum

A fundamental claim made by and for Deleuze and Guattari's materialist monism is that of the (re)discovery, sedimented into thought, of a distinctive mode of apprehending matter. This apprehension, opposed to the hylomorphic model that had presupposed "a fixed form and a matter deemed homogeneous" (Deleuze and Guattari 1980/87 508/408), is of a matter reconceptualised, redefined, as the machinic phylum, it is an approach to matter as "materiality, natural or artificial, and both simultaneously; it is matter in movement, in flux, in variation, matter as a conveyor of singularities and traits of

expression" (Deleuze and Guattari 1980/87 509/409). The sixteenth century materialist heretic, Giordano Bruno, had also offered a vision of this phylum in his Anti-Aristotelian formulation: "matter produces forms from itself [...] and does not receive them as from outside" (Bruno 1998 81), and this is no surprise, for as Whitehead notes "the non-evolution of matter has been a tacit assumption throughout modern thought. Until the last few years the sole alternatives were: either the material universe, with its present type of order, is eternal; or else it came into being, and will pass out of being, according to the fiat of Jehovah" (Whitehead 1978 95). Hence, the indication that the machinic phylum was to be "(re)discovered" is predicated upon supposing it to be the guiding axis of a longstanding, serpentine tradition within philosophy and science. For Whitehead the thought of the phylum is one that erupts periodically into history, crystallising in particular thinkers. It is a thought that had forced its way into view with Bruno, and that had, I have argued appeared in Spinoza; it is expressed in Bergson's *Creative Evolution* at the turn of this century, and now in Deleuze. The concept of the machinic phylum lies within the purview of the, oft simplemindedly, derided tradition of vitalism, but it is a certain vitalism construed in such a way as to be one of the constituent elements of the counter-tradition already alluded to, put succinctly it is a vitalism in which the place of *Geist* or spirit is taken by the brain[75]. This is, to follow Bergson, a brain only actualised in immanence, a brain that is recognised in consciousness of x. Consciousness severed from the transcendental, it is always *of* something. A brain, moreover, that is multiple, fractured, riven by synaptic clefts, no longer the homogeneous object of phrenology; rather

one in which the "model would be rather a state of things which would constantly change, a flowing-matter in which no point of anchorage nor centre of reference would be assignable" (Deleuze 1983/86 33/57). It is such a state of affairs, this coexistence of structure and change that von Bertalanffy was attempting to capture in his dynamic descriptions of 'flowing balance' or *Fliessgleichgewicht* (Capra 1996 48). Now vitalism, as Deleuze and Guattari insist has never been one, indeed it is multiple and "has always had two possible alternatives: that of an Idea that acts, but is not — that acts therefore only from the point of view of an external cerebral knowledge (from Kant to Claude Bernard); or that of a force that is but does not act— that is therefore a pure internal Awareness (from Leibniz to Ruyer) [...] the second interpretation seems to us to be imperative" (Deleuze and Guattari 1991/94 201/213). The variant of vitalism, described on occasion as a "technological vitalism'" (Deleuze and Guattari 1980/87 507/407) that is being suggested, is not the vitalism that is usually baldly counterposed to mechanism. Indeed as some contemporary biologists have recognised, the alternative to mechanism is not vitalism, but complexity, and this latter is an imperative component of the contemporary form of *superior materialism*[76]. This is a vitalism that has ceased to posit entities mobilised by an extra, or metaphysical, force, a "supplementary dimension" in Deleuze's terminology, but rather one that opens entities to the outside, and stands in counterposition to the metaphysical legislation of the one, unity. It is a thought of infinite variation and modal being *pace* Spinoza. As Bruno, the "philosophical minnesinger of infinity" (Bloch 1986 848), suggests "there is no thing which is all it can be. Man is what he can be, but not all he can be" (Bruno 1998 66) and

Spinoza proclaims: "For indeed, no one has yet determined what the Body can do, ie. experience has not yet taught anyone what the Body can do from the laws of nature alone" (Spinoza 1985 E IIIP2D); the driving thrust of this thought marks a definitive move away from classical ontology for it refuses to think the entity as static, as the *on*, but rather makes bodies into a locus of force, a condensation of affects, it makes *potentia* constitutive[7]. For Bruno, Spinoza and Deleuze the task of thinking is open to the future, to becoming, *haecceitas* (Scotus's univocal ontology) and singularisation.

Expression-Immanence-Neoplatonism

Éric Alliez is quite adamant that his treatment of Plotinus should resist the dominant trend of Neoplatonic scholarship that "fraudulently reintroduces Plotinus into the Judeo-Christian mould" (Alliez 1991/95 37/77), and he notes secondarily that Plotinus introduces something into his system that decisively distinguishes it from Platonism— I take this novel non-Platonic addition to be the most important element of Plotinus' system that Bruno adopts— and it is the distillation here of a thought that resists capture by the dominant trends that constitute early modern philosophy in being neither Judeo-Christian nor Platonic (it is obviously non-Aristotelian, by virtue of its being a part of Neoplatonism). The distinctively non-Platonic idea that Plotinus adds, is that it is the "immanent soul, and not the demiurge, that engenders, like a living organism, a *kosmos* through the sole force of its silent contemplation of the intelligible identified with that life of the intelligence from which it proceeds" (Alliez 1991/95 80/39), and as

Deleuze confirms in his preface to Alliez' book "there is a world soul, and the soul is itself a world" (Alliez 1991/95 8/xii). It is this account of the immanent creative force that runs through Bruno's philosophy of expressive matter as the *anima mundi*.

It is only now with the development of the theory of self-organisation and the new understanding of dissipative structures that we are beginning to create the scientific models that can adequate to this, the great tradition of expressive immanence in philosophy.

Seen in this light, it becomes clear that the tradition in which Deleuze's philosophy of matter is best placed is one that he often describes as being open to the danger of pantheism, "always subject to the charge of pantheism" (Deleuze 1968/92 12/16). Seen in more contemporary terms, this is the accusation of vitalism, one that has often been levelled at Spinoza, at Leibniz and at Bergson, amongst others, as is all too familiar these figures are amongst Deleuze's philosophical heroes, and as such he is happy for his own philosophy to run the risk of this apparently lethal accusation. It is precisely lethal: for to be accused of the charge of being a pantheist or a vitalist is equivalent to that of irrationalism, mysticism, it is to find oneself beyond the remit of sound philosophy and science. For Deleuze however, there is a vitalism subject to the power of nonorganic life, "a profound link between signs, events, life and vitalism [...] Everything I've written is vitalistic, at least I hope it is, and amounts to a theory of signs and events" (Deleuze 1990/95 197/143).

In the following passage in *What is Philosophy?*, Deleuze and Guattari explicitly lay out the political stakes at play in philosophy, as well as the necessary relationship between philosophical heresy and the thought of the State on the one hand, and the philosophy of immanence and monism on the other: "Putting their work and sometimes their lives at risk, all philosophers must prove that the dose of immanence they inject into world and mind does not compromise the transcendence of a God to which immanence must be attributed only secondarily (Nicholas of Cusa, Eckart, Bruno) [...] Immanence can be said to be the burning issue of all philosophy because it takes on all the dangers that philosophy must confront, all the condemnations, persecutions and repudiations that it undergoes." (Deleuze and Guattari 1991/94 47/45).

Deleuze notes that this tradition labours under the aegis of the concept expression, and that this concept as invented by Spinoza and Leibniz, "takes on the force of an Anticartesian reaction [...] It implies a rediscovery of Nature and her power and a recreating of logic and ontology: a new 'materialism' and a new 'formalism'" (Deleuze 1968/92 300/322). The true target of this Anticartesianism in Deleuze's hands is the profoundly fractured world given in dualism, whether it be of the Platonic, Cartesian, or Kantian varieties, and as such the concept of expression comes to occupy a position at the heart of monism. Expression has two complementary components: "implication and explication, involution and evolution" bound together in the synthesis of *complicatio*, the "inherence of multiplicity in the One, and of the One in the many", ie. the pluralism-monism identity of *A Thousand Plateaus*. As Deleuze points out, *complicatio* is both, central to Neoplatonism *and*

alien to Christian thought, this latter being subject to the *simplificatio*, the "identity of the One or the unity of the Whole" (Deleuze 1969/90 398/297). As I have already suggested, *complicatio* is also critical to both Spinoza and Leibniz, there is however a gap, both historical and conceptual, between Neoplatonism on the one hand and Spinoza and Leibniz on the other. Who fills the gap? In *Difference and Repetition* Deleuze suggests a possible answer, when he writes that it is Giordano Bruno who is the "theoretician of *complicatio*" (Deleuze 1968/94 161/123). Put this way, Bruno is quite convincingly the true dark precursor of both Spinoza and Leibniz, and so ultimately of Deleuze. Moreover, it is precisely those elements of Bruno that influence Spinoza and Leibniz respectively that Deleuze picks up on and elaborates in his own work.

Immanence, Conatus and Death by Degrees

The Gay Science § 109 is the nexus for a number of convergences between Nietzsche, Spinoza and Bruno. Greg Whitlock and Yirmiyahu Yovel note that in developing his unified theory of force and in particular the *will to power* Nietzsche draws on the Spinozist *conatus*, classically expressed as

> The endeavour (*conatus*) wherewith a thing endeavours to persist in its being is nothing else than the actual essence of that thing (Spinoza 1985 E IIIP7)

For our purposes however we cannot stop with Spinoza, for the doctrine

of *conatus* can be found directly prefigured in Bruno (Deleuze of course identifies the Lucretian *clinamen* as a "kind of *conatus* — a differential of matter and, by the same token, a differential of thought" Deleuze 1969/90 365/269. Bruno was a voracious reader of Lucretius and the former's work is redolent with Lucretian tones). *Conatus* is not just one theory amongst many, it constitutes the second major axis of the line of thought embodied in Bruno, Spinoza, Schelling, Nietzsche and Deleuze: on the one side is *expression* and on the other, *conatus*; these two taken together constitute the plane of immanence drawn by this philosophical tendency. *Conatus* gives us an account of internally driven development, that is to say the immanent involution of form, or put otherwise and in a scientific register, it gives us an account of self-organisation, which is nothing other than an account of order, of Spinoza's persistence being driven entirely internally without the stamp of any transcendent influences, without the slightest trace of a mysterious *deus ex machina*. This then is the sense in which, as Negri suggests, vitalism inverts itself at the very moment of its enunciation. This inversion of vitalism will be seen as the horizon of any philosophy attempting to adequate itself to recent conceptualisations within science of the various manifestations of self-organisation, of autocatalysis. That which Nietzsche calls *will to power*, and Spinoza calls *conatus*, Bruno terms "vital principle" (Bruno 1995 156) or elsewhere "the internal artificer" (Bruno 1998 38), and he is quite explicit that this principle is part of immanence, so even earlier than expected we find that Bruno had posited a vitalism already purged of all metaphysical residues.

it shapes matter, forming it from inside like a seed or root shooting forth and unfolding the trunk, from within the trunk thrusting out the boughs, from inside the boughs the derived branches, and unfurling buds from within these (Bruno 1998 38)

> Everything is caused by the sufficient interior principle by which it is naturally stirred, and not by an external principle (Bruno 1995 156)

Kant, however, desperate to hold onto the metaphysical inheritance which by rendering matter as *lifeless* refuses this possibility of an inverted vitalism, of a hylozoism, outright, he insists that "the possibility of a living matter is quite inconceivable [...] since lifelessness, *inertia*, constitutes the essential characteristic of matter" (Kant 1952 § 73). Kant offers not an argument, but bald assertion from accepted definition, from ideological necessity, that hylozoism is atheism—matter cannot be living because matter is characterised by inertness. The preceding accusation is levelled, albeit indirectly, at Spinoza, but of the two it is Kant's system, which whilst it may not be theist, and not Spinoza's, that reintroduces a transcendental agent into its account of self organised matter[78]. The difference between Bruno, Spinoza, Schelling and Nietzsche on the one hand, and Kant on the other is given by Deleuze in his distinction between two different "conceptions of the word 'plan'". He writes, "any organisation that comes from above and refers to a transcendence, be it a hidden one, can be called a theological plan [...] it will always be a plan of transcendence that directs forms as

well as subjects, and that stays hidden [...] always has an additional dimension; it always implies a dimension supplementary to the dimensions of the given." Thus Kant. On the other hand "a plane of immanence has no supplementary dimension; the process of composition must be apprehended for itself, through that which it gives, in that which it gives. It is a plan of composition, not a plan of organisation or development" (Deleuze 1988 128). Kant certainly would have had nightmares had he access to recent experiments, principally those of Stanley Miller and Harold Urey that have attempted to recreate the conditions for the "slow brewing of early life from nonlife" (Margulis and Sagan 1997 51). As should be apparent from our earlier discussion, these experiments serve as an empirical exploration of a noncorporeal transformation, showing the roots of life in the realm of nonorganic matter.

The view of death posited in both Nietzsche's *The Gay Science*, in particular in § 109, and in Bruno's *Ash Wednesday Supper* are also identical: Nietzsche writes that "Once you know there are no purposes, you also know that there is no accident; for it is only beside a world of purposes that the word 'accident' has meaning. Let us beware of saying that death is opposed to life. The living is merely a type of what is dead, and a very rare type" (Nietzsche 1974 § 109). So too for Bruno death is merely a change of composition, of intensity: "when we see something which is said to die, we must not believe that that thing dies but rather that it changes and terminates its accidental composition and unity" (Bruno 1995 157), that is to say: it undergoes a change of organisation, of consistency. To send out a further link to themes pursued elsewhere

in this thesis, it must be noted that in the same passage Bruno expresses the view that "since everything participates in life, *many and innumerable beings live not only within us but also in all composite things*" (Bruno 1995 157, emphasis added), this is a line of thought that passes directly into Leibniz's *Monadology*, Nietzsche's critique of the unitary subject, Deleuze and Guattari's affective, contagious view of biological involution, and eventually finds empirical confirmation in Lynn Margulis' account of the birth of the eukaryotic cell through the capture of the once independent cyanobacteria that live in every cell and still maintain an entirely separate DNA and RNA[78]. Every living cell contains aliens crucial to its survival, Deleuze's "thousands of little witnesses which contemplate within us" (Deleuze 1968/94 103/75), Nietzsche's alien forces (Nietzsche 1968 § 728). To follow DeleuzeGuattari and their source on the concept of consistency, Eugene Dupréel, "life went not from a centre to an exteriority but from an exterior to an interior, or rather from a discrete or fuzzy aggregate to its consolidation" (Deleuze and Guattari 1980/87 405/328).

Nietzsche ends *The Gay Science* § 109 with the programmatic question, "When may we begin to 'naturalise' humanity in terms of a pure, newly discovered, newly redeemed nature", and as if in response *avant la lettre*, Spinoza had written to Oldenburg that "the human body is a part of Nature. As regards the human Mind I think it too is a part of nature" (Spinoza 1966 XXXII). There is a consistent tradition in philosophy that seeks to carry out precisely this naturalisation stretching from Lucretius to the Arab historian Ibn Khaldûn whose startling book of 1377, *The Muqaddimah*, holds that "man belongs to the genus of

animals [...] created from a drop of sperm, a clot of blood, and a lump of flesh" (Khaldûn 1967 340), and from Bruno to Spinoza and Nietzsche.

A Rather Forbidden History

Amongst the philosophically significant results of this approach is the fusion of production and expression (and hence the dissolution of dualism), and with it the possibility of gaining access to a certain subterranean philosophical tradition, a tradition with "a rather hidden, and a rather forbidden history" (Deleuze 1968/92 322/300). A tradition that is most forcefully and subversively represented in the work of Giordano Bruno. Whilst Deleuze's direct references to Bruno are few, two to be precise, they are exceptionally important and philosophically fecund. These two references stand as brackets around Deleuze's philosophical career appearing as they do at its two ends (in 1968's *Différence et Répétition* and *Le pli: Leibniz et le baroque* written in 1988). These two direct references stand facing each other on the Moebius strip that represents Deleuze's thought, for they both refer to Bruno as the great expositor of the theory of *complicatio*. Deleuze's entire career can be understood then as a vigilant pursuit of what can now be seen as a great Brunian theme, as a perpetual spiralling around a development of this *complicatio* in the shape of the magic formula "PLURALISM = MONISM" (Deleuze and Guattari 1980/87 31/20); this formula is the basis upon which the DeleuzoGuattarian philosophy of matter is built, and it is the seed that generates the peculiar intimacy of the questions of individuation, singularity, intensity in that philosophy.

Bruno, Philosophy, Creation

For Bruno the hylomorphic couple is broken by rendering form immanent to matter, and different entities (formed matters) aspects of the singular substance (it is from this that Spinoza derives his intensive understanding of the modes), it is the continual generation of form from within matter that is constitutive of reality. Without using the terms of the critique of hylomorphism, Hilary Gatti assesses Bruno's critique of contemporary science in a way that reflects some of its concerns, she notes that Bruno takes "the new mathematics [...] as a schematic abstraction attempting to imprison the vital vicissitudes of matter into static formulae of universal validity" (Gatti 1999 3), hence State science is characterised as a mode of capturing, of overcoding, an inert matter, contrary to the hylozoic, vitalistic practice of following singularity. Ilya Prigogine expresses this Brunian project as being the quest of those explorers of the contemporary sciences who have understood the need to undergo the complexity revolution, the abolition of the counterposition between being and becoming. For Deleuze this has both epistemological and ontological ramifications, for "there is no other truth than the creation of the New: creativity, emergence" (Deleuze 1985/89 191/147). It is Bruno who first provided an ontological picture powerful enough to sustain this, in his understanding that "when form is separated from matter it ceases to exist, as is not the case with matter" (Bruno 1998 86). Nuccio Ordine, in his remarkable book on *Giordano Bruno and the Philosophy of the Ass*, is also cognisant of the importance of invention to philosophy,

noting that Bruno's "concept of language [...] expresses a strict relationship with philosophy. Words and terminology become malleable materials that are controlled and shaped to express a view of the world [...] Bruno reaffirms the possibility of inventing new words [...] '[Bruno's concept of] language,' writes Ciliberto, 'is an expressive reality [...] The linguistic plane becomes interwoven with the essential planes of human history'" (Ordine 1996 154). Gatti suggests that Bruno's critique of language, principally in *A General Account of Bonding* (*De vinculis in genere*), represents an attempt to "demonstrate the ways in which language in all its forms acts on human behaviour, influencing and even enslaving the will" (Gatti 1999 3), in other words, she attributes to Bruno, albeit in very different terms, an account of the linguistic order close to Deleuze and Guattari's account of the language of the State as one of overcoding. Bruno's demand that philosophy become a creative endeavour is enunciated, as is every point of his metaphysics, in parallel with a political critique, and forges and is forged in, what Ordine calls a "structurally anti-pedantic language". Given that Ordine's final chapter, 'Natural Science and Human Science: A 'Nouvelle alliance" refers to the title of Isabelle Stengers' and Ilya Prigogine's book of the same name, it is perhaps not surprising that he is uncannily close here to what Isabelle Stengers has called the "the real risk of speculative thought", that is, the creation of concepts which permit an "experimentation of which our habits are at once both the ingredient and the target [*cible*]" (Stengers 1997b 142). Creation, the invention of the new, is converted from being a subjective demand for freedom of expression to embodying yet again a Brunian plane of immanence; he writes "we will be the inventors of new words for new things, wherever

these words might come from. Let Grammarians be the servants of words, we will have words serve us."[80]

Brunian Biology

Arguments similar to that espoused here, specifically that Bruno's work is peculiarly untimely, and has a particular relevance for contemporary scientific debates, have come to prominence in various ways in recent Bruno scholarship, in particular in work by Gatti, Mendoza, and to a degree Ordine. Gatti offers a concrete genealogy to account for this, suggesting that the interest in Bruno in the Romantic period, in particular by Schelling and Coleridge focused on his "vitalistic concept of matter" (Gatti 1999 141). She notes that in the late nineteenth century "several commentators would consider Bruno one of the principal forerunners of an idea of natural evolution" and cites H. F. Osborn's 1894 work, *From the Greeks to Darwin: An Outline of the Development of the Evolution Idea* to this effect, curiously enough Vernadsky thought that Osborn was "one of the most eminent naturalists and thinkers of our time" (Vernadsky 1998 111). Gatti goes on, somewhat unfortunately, to claim that it is "interesting to think of [Bruno] in reference to the newest biological discoveries such as DNA" (Gatti 1999 142). Unfortunate because DNA is a peculiarly bad example for reasons that I shall attempt to explain.

Bruno *is* relevant to contemporary scientific debates, but not for Gatti's reasons, and not to the debates that she suggests. The problem with Gatti's account and with her example is that she has no knowledge

of, what we have denoted as, *the complexity revolution*, or of ideas connected to self-organisation. Gatti then, is committed to an account of science that is strictly pre-complexity. As a consequence, she is unable to take account of the truly radical implications of Brunian ontology and cosmology which, as I have been at pains to point out, coincides not with the molar, overcoding procedures of State science, of which the DNA model is a case *par excellence*, but with Deleuze and Guattari's molecular destratifying critique of it. A final note of caution: whilst I have claimed that Deleuze and Guattari carry out such a critique they may not have been aware of it*s* full implications, as Ansell Pearson makes clear "Deleuze does not appear to appreciate [...] that his thinking [...] presents a fundamental challenge to some of the core tenets of the neo-Darwinian synthesis" (Ansell Pearson 1997 129).

Elements of a critique of the popular and scientific 'myth' of DNA can be pieced together from varying sources. But first, the nature of the myth: principally the deference to DNA as the overarching, all powerful source of explanation for all questions, physical and biological, embodied in the immense investment of financial and institutional resources in the Human Genome Project (HGP)[81]. The HGP is perhaps the most prestigious and overdiscussed international scientific research project currently in existence. The goal of the HGP, that of mapping the entire human genome has acquired, perhaps more than any other scientific project, beating even the discovery of cures for cancer and AIDS, the status of a holy grail. Certainly in the popular, and to some degree, in the scientific, imagination the achievement of this goal is seen as some kind of panacea for a cornucopia of human ailments: it will enable a

cure for all genetic diseases, and reveal the solutions to a multitude of mysteries, the mechanisms of aging and the nature of intelligence amongst them (an excellent selection of essays on the various social and scientific issues involved is Kevles and Hood 1992). The elements necessary for a critique, of what is essentially the greatest coding problem ever set, can be found in several places. First, DeleuzeGuattari's account of the mechanisms of transcoding and transduction which together constitute multiplicities or becomings: creative involution, a critique of the "vapid and foggy notions of the innate and the acquired" (Deleuze and Guattari 1980/87 409/332). Second, in "the post-Darwinian conception of the evolutionary process [...] as *bricolage*" (Varela et al 1991 196), which is in effect a recapitulation of Deleuze and Guattari's account of the machinic. Third, in Vernadsky's account of the biosphere, in which the distinction between organisms and the environment is rigorously questioned, and the relationship between them conceived as thoroughly and actively bilateral, that is a critique of the idea that "organisms are basically parachuted into a pregiven environment" (ibid. 198). Richard Lewontin has expressed the idea thus: "the environment is not a structure imposed on living beings from the outside but is in fact a creation of those beings. The environment is not an autonomous process but a reflection of the biology of the species [...] there is no organism without an environment, so there is no environment without an organism" (Lewontin quoted in Varela et al 1991 198). Following on from Vernadsky, Lynn Margulis has argued that one can no longer imagine a narrative of life on the planet such that organisms evolve in, and are formed by a given environment, rather there is a coeval relationship

between them: organisms make, just as much as they are made by, the environment. This is a productivist immanentist vision, such as that expressed by DeleuzeGuattari thus: "man and nature are not like two opposite terms confronting each other— not even in the sense of bipolar opposites within a relationship of causation, ideation, or expression [...] rather, they are one and the same essential reality, the producer-product. Production as process overtakes all idealistic categories and constitutes a cycle whose relationship to desire is that of an immanent principle" (Deleuze and Guattari 1974/83 10/5). In the same vein, the biologist Susan Oyama has radically downgraded the role played by genetic factors in the characteristics of the organism: "there is no intelligible distinction between inherited (biological, genetically based) and acquired (environmentally mediated) characteristics [...] What is required for evolutionary change is not genetically encoded as opposed to acquired traits, but functioning developmental systems: ecologically embedded genomes" (quoted in Varela et al 1991 200). This metaphysical prejudice on the part of biologists had in fact been exposed much earlier than the foregoing would suggest, that is in the 1920's at the Sorbonne, by that long neglected far-seer, Vernadsky, who wrote that "in most of their works studying living organisms, the biologists disregard the indissoluble connection between the surrounding milieu and the living organism. In studying the organism as something quite distinct from the environment [...] they study not a natural body but a pure product of their thinking" (Vernadsky 1998 30). My argument here is designed to show that these kinds of heretical, minor sciences, are partners of the non-mechanistic, non-determinist, materialist, anti-Aristotelian (and

by extension non-Kantian) cosmophilosophy explicit in the tradition derived from Giordano Bruno, and traced here through Spinoza and Leibniz, to Nietzsche, and thence to DeleuzeGuattari.

Antica filosofia

Bruno, like Nietzsche and Deleuze, has a taste for the pre-Socratics, and, whilst charging Aristotle with distorting the teachings of the *antica filosofia*, he adopts from Heraclitus an ontology of eternal flow, of becoming, from the Stoics, Lucretius, and Heraclitus again, he takes the concept of the universal *nous*, immanent in the universe; and as if to ensure that no ambiguities remain, castigates "Aristotle" in one of his most unrestrained attacks as "a thoroughly arid sophist, by his malignant explanations and his frivolous persuasions, [he] perverts the statements of the ancients and sets himself against the truth" (Bruno 1998 91).

Political Horizon of all Metaphysics

Clearly as soon as one posits an animate matter, or one that generates form from within, as we have seen both Bruno and Deleuze do, a "matter [that] produces forms from itself, so to speak and does not receive them as from outside" (Bruno 1998 81), one is rendering the metaphysical question intimate with the political, initiating a questioning of the need for a political regulator, philosophically this constitutes a powerful rejection of the viability of any transcendent control mechanisms, and the championing of the methods of bottom-up

self-organisation. The thought of Brunian matter then is cast as an immediate attack upon any form of political authority and an affront to the established order, it is the thought of one "brave like Lucretius [...] wrathful at human oppression" (Nietzsche 1983 189). It is Bruno's means of opening philosophy to an expanded zone of immanence, to a philosophy of expressive production.

Anima Mundi

In *Difference and Repetition* Deleuze calls Bruno the "theoretician of *complicatio*" (Deleuze 1968/94 161/123), and it seems clear that *The Fold* too is informed by him at certain crucial points, namely the idea that "Life is not only everywhere, but souls are everywhere in matter" (Deleuze 1988/93 15/11). This is Bruno's concept of plenitude and the immanent universal mind. Brunian panzooism, hylozoism. The truly revolutionary discovery of Bruno's ontology: that matter is intelligent and intelligence material, has only now begun to be realised empirically, in a neuroscience that takes its lead not from Kant, but from Bruno, Spinoza and Bergson.[82] It is under the aegis of the latter that Deleuze can write: "Intelligence is contracted in matter at the same time as matter is expanded (*détendue*) in duration; both find the form that is common to them" (Deleuze 1991 89). Current research along these lines is summed up by Fritjof Capra thus: "mind is not a thing but a process— the very process of life [...] Mind— or, more accurately, mental process— is immanent in matter at all levels of life [...] The entire dissipative structure of the organism participates in the process of cognition, whether or not the organism has a brain and a higher

nervous system" (Capra 1997 68); he goes on to quote the neuroscientist Candace Pert who argues that "'White blood cells are bits of the brain floating around in the body' Ultimately this implies that cognition is a phenomenon that expands throughout the organism, operating through an intricate chemical network of peptides that integrates our mental, emotional, and biological activities". The suggestion, by David Chalmers and Andy Clark in their, as yet unpublished paper, 'The Extended Mind', that mind be prised loose from its cranial container takes Pert even further, and spreads consciousness across the surface of the world. For Bruno too, consciousness cannot be localised in any one part of the body for "spirit, soul, life is found in all things and in varying degrees fills all matter" (Bruno 1998 45). Deleuze's explication of the "universe that has lost all centre as well as any figure that could be attributed to it" (Deleuze 1988/93 131/124) is given in Bruno's radicalisation of Copernicus, the move "far beyond and above him [in which] the ceiling of the heavens cracks, to which the latter had left the fixed stars attached" (Bloch 1986 848). One important consequence of this radicalisation, of Bruno's abolition of the Medieval conception of the crystal spheres, is the new picture of an infinite universe that can be extended on both macro and micrological scales. Lovejoy has eloquently described this position as one of "universal parasitism, of life everywhere preying on life, and of the human body itself as infested with myriads of tiny predatory creatures" (Lovejoy 1978 238), a picture presciently paralleling that given to us by contemporary biology of the omnipresence of bacteria.

Dead Matter

One of the central tropes of State philosophy attacked by Deleuze is representation, principally condemned as the "site of transcendental illusion" (Deleuze 1968/94 341/265). For the purposes of our interests here, crucial to the schemas of representation is its denigration of matter, that is to say the genetic attachment to the hylomorphic coupling found in both the State sciences of control and their concomitant philosophies. To scrutinise this coupling opens us to an awareness of the antinomy in which matter is held in the different forms of the dominant philosophical tradition, "the 'blessed' tradition of philosophical thought, that is to say, the tradition that justifies Power and exalts the State" (Negri 1996b 61), consisting, as it does, in varying proportions of Judeo-Christian theology, Aristotelian formalism, Kantian schemas, and liberal politics, and the many varieties of what Bataille felicitously calls its "metaphysical scaffolding" (Bataille I 220). The antinomy, central to this scaffolding, in which matter is held is one in which it is taken to be, on the one hand inert, dead, only subject to motivation under the impact of an external force in one guise or another, whether it be Platonic form, spirit, Hebrew *ruah* (consider the now canonical invocation of the *Golem*, dead matter vitalised by the addition of the external life giving words[83]), or subjectivity; on the other hand, matter is quite simply the accursed, evil. This latter position is embedded in a very ancient tradition stretching from the Gnostics, through Augustine and Plotinus, the latter states baldly that matter is "primary evil" and "evil *per se*", and on in to the principal dualisms that have dominated philosophical speculation since Descartes[84]. It is this

determination of matter as the inert, the dead, that forms then a centrepiece of the, ultimately theological, architecture of the philosophical tradition. Conversely the minor tradition that Deleuze invents and that is being augmented here, principally with the names of Bruno, and Bataille, is a philosophical heresiology committed to a virulent thought of creative, active matter and the practise, actualised both philosophically and scientifically, of following immanent singularities as opposed to the imposition of transcendent plans upon the inert[85]. These philosophical heretics have parallels in the sciences, principally Vernadsky, Bateson, Margulis, and Kauffman. These explorers have recognised the value invested in the hylomorphic structure and have taken it upon themselves to engage in the shattering of its capture of matter, and to adopt the concomitant adherence to monism, a vital weapon in detheologising philosophy and science and simultaneouslyridding them of representation. In such a context, the evaluation by succeeding forms of State thought of Bruno and Spinoza as heretic, atheist, materialist is clear, as is the elaborate weave in which these terms are caught and bound together. "Matter", notes Deleuze is taken by philosophers from Aristotle onwards to be "already formless" such that "form is not separable from the model of the *species* or that of the *morphe*, and the whole is under the protection of the categories [...] this couple is completely internal to representation" (Deleuze 1968/94 353/275)[86]. The reconstruction of a materialism worthy of the name would be then, in Bataille's words, "the obstinate negation of idealism, which amounts to saying ultimately, of the very basis of *all* philosophy" (Bataille I 220), this statement comes at the beginning of an article of inestimable value for our project, 'Base

Materialism and Gnosticism'. An article, of inestimable value for its declaration of a war in philosophy on the basis of the evaluation of matter; its isolation of the question of the status of matter as crystallising the theological issue at stake in philosophy, centring around the equivalence of matter with evil; its speculations upon the utilisation of a philosophy of matter in overturning the "great ontological machines"; and finally for its recognition of the importance of Gnosticism as one of the root sources for the, as we have seen, Plotinian equation of matter with evil. Bataille is doubly important for this study: first as already noted for his construction of a materialism implacably opposed to every residue of idealism in the dominant philosophical traditions, a tradition that still accords to Deleuze's characterisation of Kantianism as a "renovated theology" (Deleuze is of course following Nietzsche here, for whom: "In the case of Kant, theological prejudice, his unconscious dogmatism, his moralistic perspective, were dominant", Nietzsche 1968 § 530). Second, and perhaps more radical, is his long term engagement with, and development of, themes in Vladimir I. Vernadsky's (1863—1945) *The Biosphere*. Bataille's engagement with Vernadsky is made explicit in both *The Accursed Share* of 1946 and in the 1937 article that inaugurated the semi-legendary *Collège de Sociologie*, that is 'Sacred Sociology and the Relationships between 'society', 'organism', and 'being'"[87].

Inorganic History

For both Deleuze and Bruno, there is a history of the inorganic, an

inorganic life of things, "nonhuman becomings" (Deleuze and Guattari 1991/94 200/213), such that all things, to use Plotinus's term, are contemplations, not just humans and animals, but plants, rocks, even planets, carve out a universe, a specific series of affects that spins them into being, that allows them to differentiate themselves out of matter. Recall Deleuze and Guattari's magnificent speculative statement of their cosmophilosophy: "not all life is confined to the organic strata: rather, the organism is that which life sets against itself in order to limit itself, and there is a life all the more intense, all the more powerful for being anorganic" (Deleuze and Guattari 1980/87 628/503). A statement to which Bruno had seemingly responded, in that Talmudic fashion, with another equally great question: "How much superior must we hold that artistic intellect that, from the interior of the seminal matter, solders together the bones, extends the cartilage, hollows the arteries, airs the pores, interweaves the fibres, branches out the nerves and arranges the universe with such praiseworthy mystery?" (Bruno 1998 39). Bruno's cosmos is divine and is pervaded by an immanent mind, there is no transcendent deity, and no telos for Bruno; what there is, is a grand ecological vision, matter in a process of self organisation, prodigiously throwing out new forms, new manifestations (somewhat like the planet in Stanislaus Lem's novel and Andrey Tarkovsky's film of the same name, *Solaris*). What Bruno intuited, what Leeuwenhoeck thought he saw through his microscope, a universal parasitism, and a smearing of consciousness beyond the limits of the metaphysically legislated discrete organism, is affirmed in *Mille Plateaux*. "If everything is alive, it is not because everything is organic or organised but, on the contrary, because the organism is a

diversion of life. In short, the life in question is inorganic, germinal, and intensive" (Deleuze and Guattari 1980/87 623/499).

I will now, in the final chapter attempt to bring some of the concerns of this thesis, and its projected Schizogenealogy to bear upon a key case: that of the very birth of modernity itself. The stakes are high here, for what is shown is that the *Kampfplatz of* contemporary philosophy is one inscribed at the inception of the modernist project. The war machine mobilised by immanence is seen to be the contestation point, then as now, and it is one that simultaneously reveals and explodes, with incalculable implications the theological and political carapace of philosophy.

Elaborations on Materialism

chapter vi

The Shattering of the Crystal Spheres: 'rolling from the centre toward X'...

> Since Copernicus man has been rolling from the centre toward X
>
> (Nietzsche 1968 § 1.5)

> Since Copernicus, man seems to have got himself on an inclined plane— now he is slipping faster and faster away from the centre into— what? into nothingness? into a '*penetrating* sense of his nothingness"?
>
> (Nietzsche 1969 III § 25)

> Therein we have the reason why every man, whether he be on earth, in the sun,or on another planet, always has the impression that all other things are in movement whilst he himself is in a sort of immovable centre; he will certainly always choose poles which will vary according as his place of existence is the sun, the earth, the moon, Mars etc. In consequence, there will always be a *machina mundi* whose centre so to speak, is everywhere, whose circumference is nowhere, for God is its circumference and centre and he is everywhere and nowhere
>
> (Cusa, *De Docta Ignorantia* Bk. II, ch. 12)

Kant claims that his achievement in philosophy is the analogue of that of Copernicus' in cosmology. Colloquially this carries the sense of a major paradigmatic shift in perception: since Kant is claiming for his Critical philosophy the status of a rupture with the past, a clean break. The problem with this claim, however, is revealed as soon as one begins to examine the cosmological, metaphysical and concomitant political charge of Copernicus' work. It then becomes apparent that Kant's claim is not really as apocalyptic, as cataclysmic, or as revolutionary, for the terms, conventions, limits and possibilities of thought as he would have us think, or as conventional philosophical historiography has claimed ever since. His claim is ultimately in Bataille's sense, comical. "No one can say without being comical that he is getting ready to overturn things: He must overturn, and that is all" (Bataille I/1991 20/10). Put otherwise, in the line of thought being followed here, Kant's thought is characterised as being a "renovated theology" (Deleuze 1983 93). In consequence, far from constituting the invention of a thought that would escape the State-form and "blast open the continuum of history" (Benjamin 1973 Thesis XVI)[88], Kantianism is taken to be a clandestine means of reinstating transcendence[89]. The link between the State-form and transcendence is the compliment to the intimacy that can be explored in an abstract diagram of immanent critique and philosophico-political heresy; this intimacy is not accidental but constitutive; the State-form in its different manifestations through history is sustained by transcendence[90]. Deleuze and Guattari capture the issue thus: "Whenever there is transcendence, vertical Being, imperial State in the sky or on earth, there is religion; and there is philosophy whenever

there is immanence" (Deleuze and Guattari 1991/94 46/43). An understanding of this abstract diagram of power and transcendence is the necessary precondition of accepting Kant's claim to being Copernican, it does of course give that claim an entirely different, negative or strictly delimited, value. What is the force behind these contradictory statements? Chiefly, that Copernicus' revolution consists merely in carrying out a cosmic swapping of places: that is to say, he places the Sun in the centre of the cosmos, where the Earth had been. Copernicus, in other words, replaces geo- with the still more ancient heliocentrism[91], and trades one variant of hierarchical thinking for another, he leaves in place the clockwork mechanisms of the Ptolemaic cosmos, preserves the crystal spheres, allows them to continue floating in the ether, and allows them to continue playing the resonating music that had entertained Despots and Popes, and stupefied the subjected for a millennia and a half. This celestial symphony is not disrupted until the rude intervention of the apostate Dominican of Nola, Giordano Bruno and his decision to stop listening to the "asses dressed up with diadems and hacks decked with rings under the title of doctors" (Bruno 1998 25)[92]. It is only with Bruno that the closed cosmos of the medieval mind is definitively exploded, and it is left to Bruno to venture the possibility of a way of thinking other than the hierarchical, the stratified, and the vertical. Bruno announces the necessity of thinking the world topologically, rhizomically, and of creating concepts that will reflect the fluid complexity of such a reality, an open conceptual structure, acentric and connected each point to every other by transversal lines, a cosmos and a thought form without a transcendent centre to anchor it. Bruno proclaims an unstable

cosmos lacking hierarchy, value and direction, in which "meaning does not limit itself, for wherever it goes, always and everywhere it is visible at the centre of the horizon, whether it shifts its observation point on the surface of the earth or on the edges of the universe as it crosses other worlds" (Bruno 1879-91 I I 204). This clearly is a transformation of Cusa's dicta quoted above that God is an entity whose "centre so to speak, is everywhere, whose circumference is nowhere", into a statement with both cosmological and epistemological ramifications. Ramifications which, in contemporary cosmology, accord with Lee Smolin's statement that any description of space must be "entirely relational; there must not be any fixed or absolute structure of space" (Smolin 1997 278)[93]. As Nuccio Ordine comments, in Bruno's hands "the old cosmological concept that relegated the 'edges' to a perpetually marginal position falls to pieces, for everything can become the centre, every element can occupy a different place" (Ordine 1996 166). Deleuze and Guattari's smooth space, or plane of immanence is here perfectly prefigured in Bruno's monistic ontological and epistemological vision, but so too is Nietzsche's perspectivism[94]. When approached in this way it becomes clear quite how these diverse doctrines are all derived from the destruction of transcendental values executed by Bruno's extension of the cosmological, as well as ontological and epistemological, implications of Copernicanism to their limit, marking out the trajectory performed by the *perfect nihilist* who comes out on the other side of the inevitable event of nihilism.

Crucial to this trajectory is Bruno's adoption and transformation of the system of the Catalan mystic and polymath, Raymond Lull, and in

particular of his *ars combinatoria*, so often cited as a precursor of cybernetic machines via its influence on Leibniz' *De Arte Combinatoria*[95]. Lull's breakthrough was to endow concepts with a new fluidity and dynamism utterly alien to the Medieval world of hierarchies and categories, for as Spinoza writes "the order and connection of ideas is the same as the order and connection of things" (Spinoza 1985 E IIP7). Lull too postulates a new world in which, free from "the restraints of the hierarchical structures of medieval concepts. The concepts were now understood relative to one another, in relationships that were open because they could be reversed" (Roob 1997 287). Bruno's critique and development of Copernicanism is explicitly carried out on the metaphysical, cosmological, and political planes simultaneously; indeed, as Negri insists in his reading of Spinoza, the critique of metaphysics *is* political (Negri 1991a and 1994). In Bruno this identity is performatively demonstrated. To trace out these apparently obscure arguments is to dissect the origins, formation and philosophico-political conceptual foundations of modernity itself (a by-product of this analysis is that the terms 'postmodernity' and its cognates must be limited to their origins as terms to describe a particular architectural style; all other uses of them are theoretically naïve and historically ill informed— unless of course one is enamoured of the idea that we *are* going somewhere— by virtue of their being ineluctably tied up with one form or other of teleology, one doctrine or other of universal progress). When we start to look at this birth of modernity, we find coiled in its heart the snake of nihilism; and so to take up, and somewhat distort, a point made by Habermas, we find that this birth has happened again, and again, and again, and every

time that the refrain of modernity is played it comes accompanied by nihilism: their relationship, would appear to be symbiogenetic[96]. Nihilism is a constitutively productive element of modernity. It is the recognition of the inevitable coming of this unwanted accomplice that composes one of the elements of Deleuze's understanding of Nietzsche, and it is why he says that "Nietzsche can think that nihilism is not an event in history but the motor of the history of man as universal history." (Deleuze 1983 152).

It is not, then, with Copernicus who, after all, "maintained the idea of an absolute point of view" (Stengers 1997c 40), that any sort of threat is posed to the terrestrial order via an onslaught upon its celestial cognate, but with Bruno. The full import of this shift of attribution is considerable and has nothing to do with correcting Kant's use of metaphors, ie suggesting that he and other self-aggrandisers no longer think of themselves and their works as having the status of the Copernican revolution but rather as being Brunian in their shattering effects. This revolution, both scientific and philosophical, is described by Alexandre Koyré as follows

> the destruction of the Cosmos, that is, the disappearance, from philosophically and scientifically valid concepts, of the conception of the world as a finite, closed, and hierarchically ordered whole [...] and its replacement by an indefinite universe which is bound together by the identity of its fundamental components and laws, and in which all these concepts are placed on the same level of being. This, in turn,

implies the discarding by scientific thought of all considerations based upon value-concepts, such as perfection, harmony, meaning and aim, and finally the utter devalorisation of being, the divorce of the world of value from the world of facts. (Koyré 1957 2)

Bruno is acutely aware of Copernicus' limits, and notes them curtly, as follows: he, Copernicus "did not go much further [away from the common and vulgar philosophy] because he could not plumb and probe into matters to the extent that he could completely uproot unsuitable and empty principles [...] he did not have sufficient means to be able to defeat completely, conquer and suppress falsehood beyond all resistance" (Bruno 1995 86). The first mention in print of Copernicus' heliocentric thesis was with the publication of his *Commentariolus* in 1514, this publication was followed by a long hiatus in which it was largely ignored, and when Bruno starts lecturing upon its contents and implications, it is not as Copernicus' first acolyte and proselytiser, but as his first and most severe critic (Mendoza 1995 77), and as such, before the world was able to absorb the implications of Copernicus' system, Bruno was already bringing them news from a much more unfamiliar, disquieting planet: for barely had man been removed from the centre of the cosmos, than Bruno was abolishing the concept of centre altogether. "Bruno not only anticipated Galileo and Kepler, but he passed beyond them into an entirely new world which had shed all the dross of tradition" (Singer 1950 49).

Bruno offers a bold precursor of Deleuze and Guattari's demand that

philosophy be in accord with the formula "PLURALISM = MONISM" (Deleuze and Guattari 1980/87 31/20), as when he notes, explicitly against both Aristotelian and Platonic forms of dualism and transcendentalism, that "nature descends to the production of things, and intellect ascends to the knowledge of them, by one and the same ladder. Both ways proceed from unity to unity" (Bruno 1998 93)[97]. In this Bruno goes far beyond a naive empiricism and ventures close to a speculative materialism in his promotion of a monism of modal differentiation. Bruno writes of what is, in effect, the plane of immanence that it is "complicative [...] one, immense, infinite and comprehensive of all being, and in an explicative manner, it is present in sensible bodies and in the potency and the act that we see distinguished in them" (Bruno 1998 93). He goes on to note that it is the mark of the feeble mind that it cannot "understand multiplicity except through many species, analogies and forms [...] The premier intelligence embraces everything in a single, absolutely perfect idea" (Bruno 1998 95). This places Bruno directly in the line of univocal ontology, beyond the Scholastic categories, and in touch with a certain nominalistic critique of the Aristotelian architecture of natural species and of the *eidos*. The latter being a critique adopted by Nietzsche following Lange's position that there is "no such instance of so empty and at the same time crass a superstition as that of Species, and there are probably few points in which men have gone on rocking themselves with such baseless argumentations into dogmatic slumber" (Lange 1879 iii 27).

It is entirely predictable that any discussion of nihilism will have to begin with Nietzsche, and specifically with the writings collected as *The Will to Power*. Nietzsche's characterisation of nihilism is complex, multifaceted, and ranged over several levels, referring to several ontologically distinct objects. Without wanting to attribute to Nietzsche a closed, totalising system, it seems that the constellation of nihilism does indeed knit together several of the most important axes of Nietzschean thought. To put it in his own words, Nietzsche sees himself as "a spirit of daring and experiment [who] has already lost [its] way once in every labyrinth of the future" (Nietzsche 1968 preface § 2) and what he finds there is nihilism. The sustained understanding or diagnosis of nihilism is in a sense the most successful actualisation of one of Nietzsche's definitions of the role of the philosopher: that is as a physician engaged in the diagnosis of the sicknesses afflicting the world in which he finds himself, 'the philosopher as cultural physician'[98]. "But it is sick, this unchained life, and needs to be cured." (Nietzsche 1983 120). The philosopher as well as being a physician must be a "soothsayer-bird spirit" who "*looks back* when relating what will come" (Nietzsche 1968 preface § 3), and what this soothsayer sees in this case, is a culture which "has been moving as toward a catastrophe", and that catastrophe is the *advent of nihilism*. The describer of this catastrophe is by virtue of this vision a *perfect nihilist*, that is to say one who has gone through the experience of nihilism, the conflagration of transcendent values, and has left it behind, outside himself. Nihilism then is the diagnosis of our immediate past, and of our immediate

present. As for Walter Benjamin, so for Nietzsche, both the past and the future are littered with signs, and speak "even now in a hundred signs" (Nietzsche 1968 preface § 2). The past is a transmitter of oracular wisdom, and it is only the soothsayer who may read this oracle; but a Nietzschean soothsayer, like Benjamin's and Paul Klee's angel of history is Janus faced, he is orientated simultaneously both towards the future and the past. It is only the soothsayer, the "architect of the future" (Nietzsche 1983 94), who knows the present who may read the oracle; it is imperative that the sooth-sayer "*looks back* when relating what will come" (Nietzsche 1968 preface § 3), the philosopher must be a "telephone from the beyond" (Nietzsche 1969 III 5), and the news that he brings is that of nihilism. For Nietzsche, the coming of nihilism, and our experiencing of it, is inevitable, unavoidable, and necessary; it is so in order that Nietzsche's much vaunted transvaluation of all values may occur: we "must experience nihilism before we can find out what value these 'values' really had. We require, sometime, *new values*." (Nietzsche 1968 preface § 4). Diagnosis consists of the elements of etiology and prescription: revelation of the cause of the sickness, anatomisation of the symptoms, and prescription of a curative solution. It is for precisely these reasons that Deleuze notes that the "whole of philosophy is a symptomatology, and a semeiology", and that consequently its object of study, the "phenomenon [...] is not an appearance or even an apparition but a sign, a symptom which finds its meaning in an existing force" (Deleuze 1983 3). Nietzsche is immensely precise with each element of his diagnosis of nihilism, and unusually perhaps, no less so in his account of its etiology than in the other two elements. The precise source of

nihilism for Nietzsche lies in Nicholas Copernicus' overturning of the Ptolemaic geocentric cosmology, and its replacement with the, in certain senses still more ancient, heliocentric model; as is all too familiar, the immediate consequence of this, is that "the faith in the dignity and uniqueness of man, in his irreplaceability in the great chain of being" became a "thing of the past", Copernicus' projection placed man on "an inclined plane" so that "now he is slipping faster and faster away from the centre into— what? into nothingness? into a '*penetrating* sense of his nothingness'" (Nietzsche 1969 III 25).

It follows from this that the Copernican revolution needs to be displaced from its principal position in the narrative of nihilism, "this long plenitude and sequence of breakdown, destruction, ruin and cataclysm" (Nietzsche 1974 § 343). As already noted, Kant prides himself in carrying out a Copernican revolution in thought, he believes his own thought to be a seismic event in the possibilities, trajectories and purposes of philosophy, he believes that his *Critiques* represent a shift in philosophy as radical as that represented by Copernicus in cosmology. The Chinaman of Königsberg is of course entitled to his own self-assessment, the problem is that it is not to Copernicus that the revolution that bears his name ought to be attributed, and that hence the event that Kant believes himself to be analogous to is not a revolution but a mere holding manoeuvre on the part of a faltering, crumbling *ancien regime* of thought.

In light of the above, the issue of nihilism, when understood as a diagnosis of Occidental culture since roughly the late nineteenth

century crisis of faith must be recast. Classically it has been understood to be precipitated largely by various developments in the natural sciences, critically the Darwinian removal of man from the top of the chain of being, or rather the removal of that 'chain' altogether, and the complete absorption of the ramifications of the much earlier 'Copernican' revolution: the abolition of the geocentrism of the Ptolemaic cosmos. A single gathering wave from the sixteenth to the late nineteenth centuries. However, the advent of nihilism can be refashioned as a constantly recurring refrain in the history of thought. Understood as a persistent scepticism, and as a resolute rejection of all transcendent values, nihilism, is absolutely intimate with Deleuze's understanding of philosophy's role as a naturalism, and at the same time a part of Nietzsche's demand that philosophy become both immoral and historical. Although his work hurls countless accusations and critiques against all prior philosophy, it is arguable that one can isolate in Nietzsche two central reasons as to why "every philosophical architect in Europe has built in vain" (Nietzsche 1982 preface § 3). Kant's answer that the reason for this is the absence of a critique of reason is adjudged ludicrous. The first reason, for Nietzsche, is the eternal seduction of metaphysics by morality, and the concomitant preoccupation with truth, against which he "succeeded in making us understand, thought is creation, not will to truth" (Deleuze and Guattari 1991/94 55/54). The demand for "*historical philosophising*" is Nietzsche's response to the second of the generalised forms of the failure of all hitherto existing metaphysical philosophy, that is that they start out "from man as he is now and think[ing] their goal through an analysis of him. They involuntarily think of 'man' as an *aeterna*

veritas [...] they will not learn that man has become, that the faculty of cognition has become" (Nietzsche 1986 § 2)[99]. This is clearly a charge that can be laid against Kant, who as we have already seen specifically counsels us to "begin with man as a *fully formed adult*" (Kant 1983 49), and who acts as if science is and always will be Newtonian science and "thereby branded as impossible any opposition to classical science that was not an opposition to science itself" (Prigogine and Stengers 1984 86). Kant is quite explicit about this, and it is clear that his motivation for such a position, and for much else in his system, is derived from the necessity of resisting the implications of a philosophy of nature that has consistently dethroned the sovereignty of man, Spinoza's intention to treat man as if he were dealing with "lines, planes and bodies" (Spinoza 1985 E III preface) for example[100]. Here is Kant's most forthright statement of the necessity of limiting science:

> It is, I mean, quite certain that we can never get a sufficient knowledge of organised beings and their inner possibility [...] by looking merely to mechanical principles of nature [...] it is absurd for men to even entertain any thought of so doing or to hope that maybe another Newton may some day arise, to make intelligible to us even the genesis of a blade of grass from natural laws that no design has ordered. Such insight we must absolutely deny to mankind. (Kant 1952 § 75).

For Nietzsche the event of nihilism leaves the way open for a c*hemistry of concepts and sensations*, which in contradistinction to the frozen ontological and epistemological eternal verities of metaphysics will

recognise that

> everything has become: there are no *eternal facts*, just as there are no absolute truths. Consequently what is needed from now on is *historical philosophising* (Nietzsche 1986 § 2)

The dawn of nihilism then, construed as a thinking of "existence as it is, without meaning or aim, yet occurring inevitably without any finale of nothingness" (Nietzsche 1968 § 55), is a part of that virulent materialism that runs through Occidental civilisation in perpetual, absolute opposition, destroying idols, pronouncing the end of ideals, renouncing states, smashing superstitions, engaging in an indefatigable "practical critique of all mystifications" (Deleuze 1969/80 378/279), from Sextus Empiricus to Lucretius, Bruno to Spinoza, Marx to Nietzsche.

Kant's Secret Path

In this way, Kant's self-proclaimed revolution can be imagined as an attempt to cancel time; and the critiques can be envisaged as a massive dam built to hold back the horrors of a world without meaning, a world torn from its hinges (the most profound interpretation of Hamlet's time "out of joint"). Kant himself is adamant that the "concept of noumenon is thus a merely *limiting concept* [...] and it is therefore only of negative employment" (Kant 1929 A 255/B 311) or even more determinedly "it is not indeed in any way positive" (Kant

1929 A 252). The Kantianism system then is a sea wall built to ensure that "the voyage of our reason may be extended no further than the continuous coastline of experience itself [...] a coast we cannot leave without venturing upon a shoreless ocean which [...] compels us in the end to abandon as hopeless all this vexatious and tedious endeavour" (Kant 1929 A 395). In other words, to accept the decentring of man and the necessity of a transvaluation of all values implied by a Brunian Cosmology would, for Kant, unleash once again the corrosive speculations of those "*sceptics* [that] species of nomads" who "despising all settled modes of life, broke up from time to time all civil society" (Kant 1929 A ix). And that, needless to add, was not an option that Kant would countenance. Copernicanism was already conceptually and empirically discredited, though as is evidenced by Kant's claim to its mantle, not politically and culturally redundant, its ontological foundations shattered; its empirical suppositions superseded by the scope of Bruno's epoch leaping imagination, even before its general acceptance, and later by the observations of Galileo and Kepler. The Vatican had in fact developed a far more perceptive assessment of the metaphysical, ontological and political stakes involved in the Copernican 'hypothesis' than Kant ever did[101]. The Vatican's censorship body, the Index Congregation, characterised the Copernican enterprise "as simply a *doctrina Pythagorica*" (Lange 1879 i 232), and as a consequence didn't find it necessary to place the *Book of the Revolutions of the Heavenly Spheres* on the Index of proscribed books until seventy three years after its 1543 publication, and sixteen years after Bruno's murder, indeed as Koestler shows there is "evidence of early benevolent interest in the Copernican theory [...] by the Vatican"

(Koestler 1959 155). The Catholic hierarchy then was fully cognisant of the fact that the threat posed by the Copernicanism of its author was minimal— the old Canon Copernigk stayed in his isolated tower and troubled noone, unlike the seemingly fearless Nolan driven by an *eroico furore*, which had both Apollinean and Dionysian dimensions "the former because it was a passion for truth and knowledge, the latter because it led to death and resurrection" (Mendoza 1995 xxiv)[102] harboured no reticence about promulgating his disdain for the established order. The Canon, on the contrary was never persecuted, he was in fact feted, even encouraged, by elements reaching as high up the Vatican hierarchy as the Pope himself, and to reciprocate for this patronage, it is the name of Pope Paul III that is found in the dedications page of the *Book of Revolutions*, written in June 1542 (Koestler 1959 176); it is in this dedication that Copernicus claims "in typical renaissance fashion [...] that rather than presenting a novelty he was restoring an ancient wisdom that had been lost" (Gatti 1999 15). No such collusion occurs with Bruno, whose purpose is explicitly revolutionary and directed to the destruction of dogmatically imposed ideas and values. So if Kant can ignore Bruno, if he can write as if Bruno had never happened, and if he can pretend that the revolution really does happen with Copernicus he can keep the old order intact. As Nietzsche points out:

> since Kant, transcendentalists of every kind have once more won the day— they have been emancipated from the theologians: what joy!— Kant showed them a secret path by which they may, on their own initiative and with all

> scientific respectability, from now on follow their 'heart's desire' (Nietzsche 1969 III § 25)

That is, they can sustain the existence of the transcendental without having to resort to the theological. They can garb themselves with the cloak of revolution and simultaneously reconstitute a different "regulative fiction", a new form of "police supervision" (Nietzsche 1974 § 344). In Nietzsche's judgement, then, Kant is subject to the rebuke that he had himself directed at those he dubbed 'pretended *indifferentists*', that they "fell back [...] into those very metaphysical assertions which they profess so greatly to despise" (Kant 1929 Ax). As has already been indicated Nietzsche's diagnosis of nihilism is tripartite, the third part being prescriptive: for after the revaluation of all values comes the formation of new ones. The programme of the *perfect nihilist* is inscribed, Nietzsche reminds us, on the title page of his "gospel of the future" and it is "*The Will to Power*: Attempt at a Revaluation of All Values" (Nietzsche 1968 preface § 4), Nietzsche lives through, indeed escalates, ("You ain't seen nothin' yet"), the necessary event of nihilism, and drags something shining and new from the catastrophic wreckage, the psychic detritus of having been Christian for two thousand years. Unlike Kant, Nietzsche understands that the disarmed depth charge dropped by Copernicus had been surreptitiously retrieved, rewired and given a depleted uranium warhead of immense destructive power by Bruno. Kant retains, claws back, the centre that Bruno had abolished. In constructing the standpoint of the transcendental, Kant reformulates the Renaissance Humanist vision of human dignity, to follow Nietzsche, the Kantian

supposition of the scientific human subject deciphering natural law, the subject of the critical epistemology "was immediately employed by man for his own self-glorification" (Nietzsche 1990b § 106). The Kantian critical enterprise keeps man in thrall of the pathological desire for centring that still orders the healthy human psyche, the "coming of Spirit apprehending itself" (Prigogine and Stengers 1984 89) in Hegelian language, the psychoanalytic subject on the Freudian couch. This drive for there *to be* a centre is a veritable, persistent, pernicious pathology. Witness, for example, the history of languages of the self predicated as they are upon the equation of health with centredness, balance, symmetry (vis also conventional ideas of beauty and current spurious attempts to calculate the physical average of the perfect face based upon the deviance of the proportions of facial features from a statistical norm). This pathology is cauterised at source by Bruno and his relentlessly amoral, furiously antitheological, pursuit of the "universe that has lost all *centre* as well as any figure that could be attributed to it" (Deleuze 1993 124). In philosophical history there are two types of hermit or recluse: first is the voluntary like Kant, and second those condemned to exile, the heretical, the outcast. Contrary to his own belief that he is "a solitary by instinct who has found his advantage in standing aside and outside" (Nietzsche 1968 preface § 3) it is to the latter type that Nietzsche truly belongs,

> Outcasts of society, long persecuted and sorely hunted– also the enforced recluses, the Spinozas and Giordano Brunos– in the end always become refined vengeance-seekers and brewers of poison (Nietzsche 1990a § 25)

"The Philosopher's Serenity and Philosophy's Achievement"

As has repeatedly been intimated, it will not be enough for Nietzsche to simply recognise the necessity, the repetition, and the event of Nihilism, one must go beyond it, and take its implications on board in the task of creating *new values*. "*Radical nihilism* is the conviction of an absolute untenability of existence when it comes to the highest values one recognises; plus the realisation that we lack the least right to posit a beyond or an in-itself of things that might be 'divine'" (Nietzsche 1968 § 3). The basis for this revaluation, for this living through, lies in a dizzying perspectivism and a defiant cheerfulness that enables one to approach the "gloom without any real sense of involvement and above all without any worry and fear *for ourselves*" (Nietzsche 1974 § 343). Related to this, and presumably with the just quoted passage from the *Gay Science* in mind, Deleuze and Guattari make a very simple yet astounding comment about what is commonly held to be the archetypal, the pinnacle, event of nihilism, they write that "for philosophers neither atheism nor the death of God are problems [...] That philosophers still take the death of god to be a tragedy is astonishing. Atheism isn't a drama, but the philosopher's serenity and philosophy's achievement" (Deleuze and Guattari 1991/94 89/92, my translation). Now this idea eliminates whole currents of thought, past and present in both analytic and continental philosophy, burdened as they have been by the weight of the past, by what Nietzsche on occasion calls, the shadow of God. This truly philosophical attitude, described by Deleuze and Guattari, is precisely what

Nietzsche means by *furor philosophicus* and by cheerfulness, and Spinoza by joy. This cheerfulness is the only way to confront the "monstrous logic of terror" (Nietzsche 1974 § 343) entailed by the destruction of transcendent values, and of the consequences of 'the death of god' Nietzsche says

> They are not at all sad and gloomy but rather like a new and scarcely describable kind of light [...]
> We philosophers and 'free spirits' feel, when we hear the news that the 'old god is dead', as if a new dawn shone upon us; our heart overflows with gratitude, amazement, premonitions, expectation. At long last the horizon appears free to us again, even if it should not be bright; at long last the horizon appears free to us again, even if it should not be right, at long last our ships may venture out again. (Nietzsche 1974 § 343)

As we have seen, the most striking result of Bruno's radicalisation of Copernicus is the restriction of the Canon's work to a mere cosmic swapping of places. The Nolan, on the contrary, eliminates the entire medieval machinery, with its armillary spheres, its fixed firmament, hierarchies and centres and replaces it with an infinite, acentric, topological smooth space.

> You will no longer say that there is an edge or limit either to the extent or motion of the universe; you will esteem the belief in a *primum mobile*, an uppermost and all containing

heaven, to be a vain fantasy (Bruno 1950 361)

It is with this invective that Bruno admonishes those who still hang on to a medieval or even a Copernican cosmos, and he might have added with Nietzsche and Admiral Turenne, "You tremble, carcass? You would tremble a lot more if you knew where I was taking you" (Nietzsche 1974 277)[108]. It is this abolition of the cosmological *primum mobile*, that had lead Bruno to the requisite perspectival and historical approach to epistemology that Nietzsche prescribes. Two options for knowledge are posed in the aftermath of the event of nihilism. For Nietzsche both must be avoided with equal vehemence, on the one hand, there is the stifling atmosphere— one that had made Kleist so suicidal— of Kantianism's "gnawing and disintegrating scepticism and relativism" (Nietzsche 1983 140), an atmosphere of scepticism in which "no one can live" (Nietzsche 1990b § 84), and on the other, the pathological "*belief in truth* [which] makes its appearance as a social necessity [and] has a *moral* origin" (Nietzsche 1990b § 91). Nietzsche's response to both of these dire options "lies not in *knowing*, but in *creating*" (Nietzsche 1990b § 84). One of the clearest statements as to what Nietzsche means by this is as follows

> For the plant the world is thus and such; for us the world is thus and such. If we compare the two perceptual powers we consider our view of the world to be the more correct one, ie. the one that corresponds more closely to the truth [...] The natural process is carried on by science. Thus the things mirror themselves ever more clearly, gradually liberating

> themselves from what is all too anthropomorphic. For the plant, the whole world is a plant; for us, it is human (Nietzsche 1990b § 102)

It is a constant of Nietzsche's critique of Kant that the latter remains ahistorical, that his philosophy is "entirely outside the historical movement; without any eye for the actuality of his time [...] way off when it comes to great historical values" (Nietzsche 1968 § 95, 101). Directly tied to this is Kant's reinvention of the sovereign human subject, and the reinscription of this subject in the centre of the knowable cosmos though the invention of the categories of reason. It is upon this that Kant provides a basis for the anthropocentric platitude, *man is the measure of all things* — dismissed by Nietzsche as the "*hyperbolic naiveté* of man" (Nietzsche 1968 § 12), the quintessence of humanism against which Bruno had so diligently fought, and against which he posed with Nietzsche, man's "smallness and accidental occurrence in the flux of becoming and passing away" (Nietzsche 1968 § 4). Similarly Michel Serres has emphasised the ontological and epistemological consequences of this flattening of the Medieval hierarchy of being on a cosmic scale thus

> Nothing distinguishes me ontologically from a crystal, a plant, an animal, or the order of the world; we are drifting together toward the noise and the black depths of the universe, and our diverse systemic complexions are flowing up the entropic stream, toward the solar origin, itself adrift [...] this is complexity itself, which was once called being.

(Serres 1977/82 272/83)

Since the result of nihilism is the recognition of the destruction of man's privileged position within the acentric, valueless, non-hierarchical entanglement that is the world, and that Nietzsche warns against and actively seeks to circumvent, the possibility that his analysis, his diagnosis of nihilism, will be taken for a merely negative platitude; he writes that "nihilism is not just a collection of speculations around the theme 'all is in vain!': it is not just the thought that everything deserves to be destroyed: the nihilist helps to destroy" (Nietzsche 1968/95 § 102/§ 24, my translation), and having destroyed, rebuilds.[104]

The Shattering of the Crystal Spheres: 'rolling from the centre toward X'...

conclusion

Towards a Schizogenealogy

I have tried, throughout this thesis to insist upon the radical, and unbreachable, chasm that exists between, on the one hand, Deleuze and DeleuzeGuattari's *heretical materialism*, and on the other hand, the traditions that dominate philosophy. The differences exist on many levels as I have endeavoured to articulate, but perhaps the most important, at least for my proposed project of creating a Schizogenealogy, to which this is merely a prelude, is one that appears on the level of affect and that directly grows out of the conclusion of my last chapter.

Deleuze and Guattari are not unique in pointing to the event of nihilism, indeed this is common to most of their erstwhile contemporaries; where they are unique though, is in their response to this event. For contemporary French philosophy, and its Anglophone reflection, is dominated by a thought of mourning, a thought that Deleuze has rigorously refused, in describing his own work as "not a work of mourning; non-mourning takes even more work" (Deleuze 1990/95 118/84). He goes on to further displace his project: "I've never worried about going beyond metaphysics or the death of philosophy" (Deleuze 1990/95. 122/88), and finally, in their last joint work, Deleuze and Guattari declare that "we have never been bothered with the death of metaphysics or the overcoming of philosophy: it is just pointless, idle incoherencies [d'inutiles, de pénibles radotage]" (Deleuze and Guattari 1990/95 14/9). The philosophy that Deleuze offers is an invitation to life, to the active continuation of philosophy, to its creative, inventive becomings hybrid. In active opposition to the philosophy that throws up its hands in surrender at the supposed superior grasp of the sciences

on truth, and that mourns the loss of certainty brought about by the creative destructions of immanence's struggles with transcendence, philosophical thought for Deleuze "is creation, not will to truth" (Deleuze and Guattari 1991/94 55/54). It is the invention, and actualising, of virtual potentialities from the texts of science and philosophy that is sought by a Schizogenealogy, a positively constructive task, a rebuilding from the ground up, as Marx, Nietzsche, and Deleuze all suggest.

The approach that I have adopted here, and the readings offered, are an attempt at an original and innovative intervention into the reading of our philosophical modernity. The thesis' novelty and radicality then is triply marked. First by the attempts to produce materialist readings of Bergson, Spinoza, Bruno, and to a lesser degree, of Schelling which would vitiate the charges of vitalism, idealism, mysticism, and determinism which prevail in their reception. However, such readings are not carried out for the sake of hermeneutic superiority, nor to ascertain the truth of these texts, nor finally are they arbitrary, but rather these readings seek potentialities that can be actualised, elements that can be assembled to build a war machine active in the terrain of philosophy. This is not done with etymological investigation, syntactical boldness, grammatical invention, or typographical cleverness (I noted Deleuze and Guattari's rejection of such techniques in the first chapter, see 1980/87 33/22), but rather by seeking those moments where a philosophical opposition emerges. Second, and perhaps most significantly, I have, by locating the few, very brief references to Bruno in Deleuze's work, been able to: shift the

framework in which the latter is seen; and demonstrate the crucial role that Bruno plays in the organisation of the tradition of heretical materialism. The discovery of Bruno, the revelation of clear Brunian influences upon key figures in Deleuze's genealogy (Spinoza, Leibniz, Nietzsche, Schelling, arguably Marx, and indirectly Bergson through the latter's close study of, and admiration for, Plotinus), is doubly critical, and this introduction leads to the third major claim. It is argued that a Schizogenealogy severely contests the dominant construction of modernity in terms of a generalised acceptance of, and reverence for, the projected founding break made by Kant's self-declared 'Copernican' revolution (indeed, the very word 'revolution' is historically bound up with Copernicus). The result of displacing, and limiting the radicality of Copernicanism, and thereby Kantianism, allows for the rescue of a powerful tradition of ontological materialism from deliberate obfuscation, it enables us to "wrest tradition away from a conformism" (Benjamin 1973 Thesis VI) that has very nearly convinced everyone of its power. The retrieval of the conceptual innovations of this tradition, and their mobilisation opens the possibility for an explosion in the hitherto closed continuum of contemporary history, "it gives that configuration a shock" allowing us to "blast a specific era out of the homogeneous course of history" (Benjamin 1973 Thesis XVII). Philosophy, seen through Schizoanalytic eyes, is *stratigraphic* "a grandiose time of coexistence" in which the figures retrieved and rescued from the image given to them by State thought, are all our contemporaries, luminous points "like dead stars whose light is brighter than ever" (Deleuze and Guattari 1991/94 59/59).

It must also be insisted, and I have done so often, that contrary to 'good sense' and to doxa, philosophy is the site of war; it is not a polite exchange of opinions, the "Western democratic, popular conception of philosophy [...] providing pleasant or aggressive dinner conversations", a conception which has never "produced a single concept" (Deleuze and Guattari 1991/94 138/144, 12/6). Philosophy as it is understood here, with the identity of ontology and politics, is the privileged site of political conflict, at which the highest stakes are raised. Recall that, as we saw in the chapter on Bruno, the philosopher "puts their work and sometimes their lives at risk", and that this is seen most sharply in the question of immanence, "the burning issue of all philosophy because it takes on all the dangers that philosophy must confront, all the condemnations, persecutions and repudiations that it undergoes [...] the problem of immanence is not abstract or merely theoretical. It is not immediately clear why immanence is so dangerous, but it is. It engulfs sages and gods" (Deleuze and Guattari 1991/94 47/45).

The philosophy explored in a Schizogenealogy is not a discipline abstracted from the world, it is militantly active, immanent to the world, in the identity of brain and world so eloquently discussed in the second of the two books on cinema. Here, in formulating a Schizogenealogy of heretical materialism, I have sought those singularities where philosophy actualises a break with doxa, where a thought of immanence wrests a materialism from the image forced upon it by metaphysics. I have tried to show that a pragmatically emplaced materialism always actualises philosophical revolt, it is a *cacoethes*, an uncontrollable urge for something harmful. Deleuze asks,

for whom is philosophy harmful? He claims too, that it is not clear why immanence is so dangerous. I have tried to shed some light on the second, to diagram the dangers of immanence, or to put this in the terms of the first question, to show that the harm, the damage, that immanence can do, is to the thought of the State, to the "tradition that justifies Power and exalts the State" (Negri 1996b 61), to the powers of mystification, and to the transcendent.

appendix

Georges Bataille, 'Evil in Platonism and Sadism' (Monday 12 May 1947).[105]

I have chosen to include this piece for a number of reasons, reasons identical to those which drew me to translate it in the first place. In this lecture, I see Bataille doing something both akin to, and quite different from, what I am trying to achieve on one level. That is his attempt to treat, in a direct and unmediated fashion, metaphysical and ontological questions as first and foremost political ones. As is suggested in the first footnote to the piece, this talk was given in the immediate aftermath of the Holocaust, of the "diabolical organisation of the concentration camps" (Deleuze 1985/89 237/207), of the destruction of Europe. Given in a city barely free from Nazi occupation it represents one of the earliest attempts to discuss philosophically that most momentous eruption of mechanised death, to discuss "the world of the concentration camp" which "operates as much by lineages and territories as by numeration [and in which] The question is not one of good or bad but of specificity" (Deleuze and Guattari 1980/87 486/390). Furthermore, it is a particularly virulent example of the achievement of the "great post-war philosophers and writers", the demonstration that "thought has something to do with Auschwitz" (Deleuze 1985/89 239/209), and that thought is immanent to life and history. In this piece Bataille shows how "the internal sheets of memory and the external layers of reality will be mixed up" (loc. cit.). It is intriguing then, that in all of the extensive debates about the Holocaust in French philosophy that this piece and the series of arguments that it initiates in Bataille never figure. A principal reason for this, I would suggest, lies in its fearless approach to the question of immanence, and its concomitant critique of the theological nature of the dominant traditions of philosophy. In a sense then, this returns to an issue raised at the very

start of this thesis. For Bataille focuses questions about death and matter as the breaking point at which a counter-tradition singularises, it takes the eruption of immanence as the starting point of philosophy, and treats the event of nihilism, the conflagration of transcendent values, not as a site of mourning of so many 'deaths of' and 'ends of', but as the beginning of philosophy, of an always heretical philosophy in immanence.

Bataille– 'Evil in Platonism and Sadism'

We can interpret the common assumption that we currently live in a state of deep moral disorder in several ways.[106] We have forgotten, in particular, that those contemporary ethics, upon which behavior and judgements are founded, are based upon very ancient dualisms in the realm of principles.

It was once thought, and perhaps it still is, that the world sets two principles against each other: the principles of matter on the one hand and of spirit on the other. It is not generally conceded that matter is held to be evil and spirit, good. It is, I think, nevertheless, the general tendency of all religions — the major religions at least — to hold matter to be evil, and spirit, good.[107]

I don't want to start out from quite such a crude schema however.

In spite of being unable to accurately attribute this more precise formula to Plato, even though it has subsequently taken on more meaning, one can give to the following proposition a fairly solid value: the good would not be spirit, it would not be the idea, it would not be reason, but it would be the government of reason; and evil would be the fact that reason is governed by matter, if you like, and with regards to behavior, by the passions. According to this Platonic conception, evil is instantiated at the moment when reason becomes dominated by the passions.[108]

I think that one can establish an absolutely diametrical and in a sense inevitable opposition between this Platonic notion and a principle to

Bataille— 'Evil in Platonism and Sadism'

which Sade, even though he doesn't express it directly, gave a gripping form, when, in *Philosophy in the Bedroom*, he depicted the death penalty as the most indefensible act, even though he had, in all his work, only depicted the murder of others as, one can hardly put it otherwise, the good.

Nevertheless he condemned the death penalty as a principle.[109] For Sade, a punishment that implies the unleashing of the passions cannot be dealt out unemotionally. It is unacceptable to Sade, to unleash one's passion on a man to such a degree that one kills him[110] simply because a judge requests it or because reason demands it.

I think it difficult at best to oppose the two principles which I have just ascribed to a part of Platonism and those implicit in the judgments which Sade formulates in *Philosophy in the Bedroom*.

We are not at present, overly troubled by ethical questions. In general, and perhaps justifiably we are governed by very crude, very vulgar judgments. We hold the moral, the good, to be, on the whole, being nice, behaving well; and living in accordance with the law, is not harming others, it is being a good family man, doing one's duty in all circumstances and earning the esteem of one's fellow citizens[111].

It is clearly conceivable, and it is difficult to seriously protest to the contrary; but ultimately, can the question of the good be posed with regard to such questions as that of the good family man etc.? It seems to me extremely difficult to do so, and for an extremely simple reason:

Bataille– 'Evil in Platonism and Sadism'

that is, if we do good in the current sense, for whatever reason, it is because there is, in so doing, a good at stake that we must either follow or not, and this good cannot be the action itself, but only that for which the action is carried out.

In this respect it seems to me that religious perspectives are rich, when compared to the emptiness of the ideas held by those who live now and are moral. In the religious perspective, the issues at stake are: the good, that is, God. From this moment on, one can no longer say that it is pointless to be concerned with this or that fact, that it is senseless on its own but only in relation to other things. At this point one would no longer be able to say that other things would be nothing: there is no nothing, there is God.

But you will go along with me when I say that God is dead, and such that it is difficult to be more dead (*d'être plus mort*).[112]

What, from here on, is the meaning of the ethics that we follow? The question of good conduct concerns us indefinitely with regards to an agreeable state of affairs. I am quite willing for everybody to come to an agreement around the fact that an agreeable state of affairs must be sought, but will we still condemn our neighbor when he tells us that he doesn't give a damn and that he is going beyond such a state. Will we be able, at that moment to doom him to the kind of abjection that moral approbation brings to bear upon anybody who ceases to behave in conformity with the law, and even in conformity to good sense? Is that sort of anger which is deaf to reason justified simply when one has to

reproach a man for not having acted in conformity with reason?[113]

This seems to me all the more questionable because it is difficult to imagine that reason commands all of men's actions in a general way. That man is not reducible to reason, is something that poses itself again in relation to the difficulty that I was just discussing. When I say that it was necessary to propose that acts taken as moral have an end that transcends them, in the sense that if we are entirely reducible to reason, it would be impossible for us to carry within ourselves an end which transcends reason, which would always be a principle of behaviour, that is, a calculation subordinated to a subsequent end but one which is never given, apart from at the moment at which one deifies it. But is deified reason exactly reason? This is what I am going to attempt to examine now.

In principle, one can encapsulate the entirety of theology in the idea that reason is deified, because the notion of God is quite precisely founded upon the principle that reason is divine, and on the principle that the divine being, the divine essence, is reasonable.

I don't find it particularly helpful to carry on talking about God if one no longer finds it credible. There is evidently something in these discussions that some people are ready to uphold: I don't know if it is worth the trouble of being cautious here, because, after all, when one has done with the notion of a reasonable God, one is forced to succeed in turning God into, I don't know if one can put this in any other way, a kind of overthrowing of himself,[114] an overthrowing of that to which this

notion is condemned to adhere, to that which it is bound up, particularly in the experience of mystics.

But everybody knows what a mystic is: it is someone who refuses to confine himself to any argument which transcends itself in advance. As a consequence, it is perhaps unnecessary to waste too much time on their opinions.

But, if we are now able to dissociate ethics from the divine, if to be more precise, we can dissociate reason from the divine, the deep covenant upon which moral outrage is based is decidedly broken. We find ourselves in a situation that is entirely open, entirely new. On the one hand we surrender ourselves to ill considered judgments, and on the other we no longer have anything spiritual: we lose meaning, the reason for which we act; we no longer know what the point is when we say that one thing is good, since we no longer know the good for which it is good.

To find oneself once again in this kind of labyrinthine problem, it is unfortunately necessary to take things up again historically. What we must question, of necessity, is the originary and fundamental division of the two principles, spirit and matter. As long as that division is established, there is, regardless of what one says, a superiority of spirit over matter, and spirit acquires every conceivable superiority, namely, on the one hand the divine, and on the other, reason.

But, this dualist division is extremely fragile. One can see that in principle, the divine must be considered as reducible to the notion of the

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sacred. Now, it is quite apparent that in its origin the notion of the sacred cannot in any way be reducible to reason: hence there is a possible slippage between the two notions. The fact that the sacred is understood to be transcendent, that it is beyond this world, in excess of everything, that it is totally other, means as a consequence that it has some relationship in principle with the world of transcendence taken as the world of reason.[115]

It is perhaps the most fragile part of the edifice upon which the entirety of human thought rests, in the sense that one can say in the simplest, clearest way that the sacred is precisely the opposite of transcendence, that in fact the sacred is precisely immanence.

The sacred in both its simplest and its most evolved forms is always something to be rediscovered, the sacred is essentially communication: it is contagion.[116] The sacred exists at the moment when something which will not be, although it must be, stopped is unleashed, and which is going to destroy, which takes the risk of tampering with, the established order.

The sacred, if one wishes to pay it sufficient attention, can be simply reduced to the unleashing of passion. And it is evident that it is this unleashing of passion that is most contrary to reason. For Plato it is precisely that which must be placed under the governance of reason, in such a way that if, at any moment, the government of reason was exceeded by this unleashing, evil would begin.

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This immanence of the sacred finds itself completely inverted in the evolution of religions, the reason for this can be quickly seen: the sacred opposes itself to the profane, and it is this opposition of the sacred to the profane that introduces a transcendence. If one passes from the profane to the sacred world, one does so by a leap: there is no other way to introduce immanence. But at this point it is necessary to ask what precisely it is that is signified by the profane world in relation to some principles that I am about to discuss.[117]

It seems to me that the profane world is quite precisely reason. Reason, whether one admits it or not, whether one calls it divine or whether one ignores it, is essentially equivalent with the profane, reason is essentially the calculation that introduces equalities; and in so far as it is this calculation, in so far as it introduces equality, it is that which is totally exterior to us, it is totally exterior to us when we are alive, when we plunge into the foundations of our selves.

If one wishes to present things in a different way, there is a transcendence of the profane which belongs exactly to objects, to everyday objects. An everyday object is completely separated from us. This table upon which my hand is resting, is as perfectly separated from me as I could wish; there is no possible contagion between this table and me, unless one introduces some irrational concept, which introduces that table over there perhaps: I don't know.[118]

But you will concede that it is easy for me, having this table under my hand, to point out to myself that all the principles that follow from the

stability, the equality of this table with itself, transcend me at the same time as the table transcends me, that is to say that it is totally exterior to me, that is to say that this flow of life which I am cannot enter it,[119] and that it presents a resistance that is inherent to it owing to the fact that it is not me, because it is before me as an equivalence (*égalité*) with itself.

If you have followed me in this account of the constitution of the world of reason, which is the constitution of the world of transcendence, and if it shows you that at a given moment, owing to the fact that the sacred appeared as transcendent through its relationship with the profane, it became possible — given that the sacred had a great value and that simultaneously one was bestowing on reason a great value — to merge (*confondre*) them by an abuse of language, which can perhaps transform reality, but which can perhaps also leave it intact. It became possible to merge them by an abuse of language. And at that point one had the concept of God and the divinity of reason.

It became apparent that this unleashing of the passions which could have been found in the sacred, found itself chained at this point. Perhaps there still is passion in God, but it is passion in the same sense that one can say that a dog is still a dog even when it is chained. Since God is reason, there is no way for God's passion to release itself. In this sense perhaps mystical experience will accord with mine, since it demonstrates that to proceed from the sacred one must give way to an unlimitable unleashing, since in order to proceed from the sacred, one must break every kind of boundary, cease to consider the limits of

reason or of morality as possible. But, once again, isn't it evident that at this point God dies? Isn't it obvious that by separating oneself from the basis upon which his identity with himself was founded, his nature vanishes, it ceases to be the guarantor of life that we had become used to thinking it was; insofar as we attach ourselves to this tradition, by covering over an abyss into which we sink voluntarily, or precisely into which the mystic needs to sink because it is necessary for him to separate himself entirely from this world of reason which is for him precisely just that which he can hate.

In this sense, the mystic, seems to me to open the way to Sade, and it is not by chance that, in an experiment which has been carried out in multiple forms, even sensual passion, the most brutal passion, the most vulgar passion, have always been combined.

Having been through this experience it is scarcely credible that anybody could hope, even for an instant, to return to a world, in which tables stand and in which one is obliged to submit to the tables simply because we all want them to stand. And for the tables to stand, there must be not only thieves, but police![120]

Once we have acknowledged this disappearance of God, we go beyond. Once God is unhinged[121] from the frame where theology, positive theology at least, had fixed him, we are longer confronted by that which I was just calling the sacred, a name which is perhaps purely pedantic, and which is ultimately just the unleashing of the passions, which is ultimately the world that Sade had depicted and which nobody wants

because it is frightening.

It is clear that these ideas don't make life any easier. As soon as one loses that control once exerted over reason by the sacred,[122] human possibility disappears as it were, it becomes somewhat blurred. Once he has absolutely lost control of reason man ceases to be man: he would be mad. And it is natural that an objection should arise, as it is quite natural that man should continue indefinitely — like a dog forever chasing its tail — to behave well, simply so that other men continue to behave well; so that there exists a world of good conduct which would indefinitely chase after something that would be contrary to this good behavior.

However, I don't know if fear can be considered by man as the last obstacle, whatever resistances one may expect to appear when this word "fear" is mentioned, one may also know that it is fundamental to man, if not to be afraid, then at least to overcome his fear. Inhering in man is a voice that urges him never to give in to fear. This response is continually given, in all sorts of random acts, and for often doubtful reasons.

But man needs to prove to himself in every way that he is not subject to fear in a final sense, that in the end he is beyond fear, and even, that he only exists beyond fear, because as long as he is governed by fear he is not yet a man.

But if it is true that in general man cannot give in to fear, at the very

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least he indefinitely postpones that moment when he will have to confront himself with the object of his fear. He indefinitely postpones that moment when, bereft of both the help of reason that God guaranteed, and of that help of God that reason guaranteed, man finally finds himself confronting his own naked image.

It is necessary to step back, but it is also necessary to leap, and perhaps in order to leap better, one has first to take a step back.

It seems to me in this regard that Sade's example is one of the most impressive, because one cannot say that Sade hadn't leapt![123] And I think that even if one wants to consider carefully a reality like that depicted in Sade's work, one must acknowledge that it surpasses us in every way: the man able to recognise his own world in *One Hundred and Twenty Days* does not yet exist.[124]

There is in this brutality that cannot take cognizance of the limit, something which makes one hesitate before leaping in every case. Perhaps, Sade's cruel representations can be considered as the precise definition of the leap that it is necessary to make, in the sense that one is not necessarily bounded by the kind of leap that Sade represents in the actions of his characters living out their most terrifying fantasies. But if it isn't necessary to follow these characters behavior exactly, the surpassing demonstrated by their behavior is sufficiently indicated in every instance by its depth.[125]

If it is unnecessary to set about treating one's neighbor in the way that

the characters in *One Hundred and Twenty Days* do, is it necessary to grant that moral liberation that I have just evoked, the distance marked out by Sade's cadavers? From a certain point it becomes impossible to joke. It is impossible to joke precisely because the unleashing of the passions is at stake, and because the unleashing of the passions is the good, which has always known how to incite men in the way that we have seen, which has given them licence to behave with unprecedented brutality, whilst they reduce the good to the impoverished things that we are familiar with.

The unleashing of the passions is the only good — this is the kernel of what I have had to say this evening — from the point when reason is no longer divine, from the moment at which there is no longer a God. There is no longer anything which for us can merit the name "sacred," which merits the name "good," other than the unleashing of the passions.

What is the meaning of our activities? What does the train of thought that we have been following mean? What is the meaning of the work which we must do in order to eat? These things always signify something placed beyond us, like the carrot that one places before a donkey when one wants it to move forward as if led on a rope. We have no choice but to stop at the point when nothing matters for us more than that which is free, at the point when nothing matters more for us than what exists at that moment.

It is possible however, to see the weakness in this argument, because when I speak of it, and as soon as I have spoken of it, I have

subordinated my life to something that was not immediately present. I cannot pretend, even when I raise my voice a little, that I am unleashing my passions here. Standing before you, I am not in the least bit unleashed. I am precisely chained. And when I raise my voice, it is perhaps nothing but a wailing (*gémissement*), because there is no other way for me to find the phrase that corresponds to my will. I am amongst you searching, but knowing that as long as I search with you I will be limited by the research that we can do together; and that limitation will remain such that the research will be nothing but a research and in no way will its object appear before us.

In order for this object to appear before us, it would at least be necessary to do what is unacceptable when we engage in discourse, because it is discourse that concerns us at the moment: it would be necessary for me to speak like a poet. I would have to forget that I had something to say to you. I would have to become wrapped up with myself before you, to forget you and live nothing but my madness.

Still, if I were to do it, I would not be able to be sure of success, because poetry itself is subject to all kinds of burden, and I think that the demands which have been made are of a character that shows the weight of which I am speaking.

All the work which developed to give poetry back the freedom which it is losing at every instant, marks the distance that I have said must be cleared by a leap. This leap can be poetry, but when poetry claims to leap at the moment it evaluates itself, when it sees the leap that must

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be made, and when it has not yet destroyed everything, then poetry is also the powerlessness of poetry.

I'll stop speaking now, but will answer any questions that you might have.

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J. WAHL: It's obviously very difficult to respond to such a talk, but even so, I'd like to invite someone to start the discussion.

I am going to say a few words, but it is very difficult, because the most formidable objection that I could make to Bataille would be to say: evidently, you are right! In which case, whatever I would say...

BATAILLE: I think that I had this objection in mind from beginning to end. I think that what I have shown is that it is an objection.

J. WAHL: The second thing, since we cannot talk about that objection, is this: you said that nothing can count more for you than what is free; it is not only unchained passion that poses objectives for itself quite arbitrarily.

But, is this passion? Doesn't it believe its objectives to be reasonable? The word "reasonable" isn't really the one that we're after. But, the impassioned man, nevertheless, thinks that he has reason even in his passion. If I take anger as an example, it is very hard to conceive of a passion without objective, without content.

Notice that I say this, but on the other hand I'd very much like to be able to explain myself, but it is very difficult to isolate passion in this way.

I am coming to the fundamental question: two oppositions have been set up: transcendence and immanence on the one hand, the sacred and

the profane on the other. What is new about this is that you identify transcendence with the profane, immanence with the sacred. In what sense is the profane transcendent? It is in a sense other than the ordinary. This table is in no way me. You said in parenthesis however, that perhaps it has a very profound relationship with me

BATAILLE: It is no longer profane.

J. WAHL: Yes, but even when it is no longer profane, it has a certain relationship with me. There is a part of me which is profane, to which I cling in order to write: it doesn't have a relationship to a sacred me, but it does have a relationship to a profane me. Yes.

Finally, I detect an echo of Sartre's *en-soi* and *pour-soi*. You say: "this table is this table." But, I'm not sure. We are no more able to find stability in the world than in ourselves. It is a pure fiction to say "this table is this table." This table is changing.

BATAILLE: It is in so far as transcendence is a fiction.

J. WAHL: The immanent is the sacred: isn't it necessary however to distinguish between the passions. I can imagine a passion which doesn't have a sacred character. The question is to know whether there are not some conditions which passion must fulfil in order to become sacred. Not all passion could be sacred. That is the question that I am posing.

BATAILLE: It is a very difficult question, and one dependent upon a

profane science, that is, it is necessary to consider very immediate things as the foundation of the profane sciences, as the subject of sociology.

J. WAHL: I don't even know if that would give us an answer.

BATAILLE: It is, indirectly, a way to proceed from sociology.

J. WAHL: I would like to pin you down on specifics, since they are not given in your answer. Why are certain passions sacred, and others not?

BATAILLE: It is always confused because the division between the sacred and the profane is continually becoming formal, and when the sacred is defined formally everything gets confused.

J. WAHL: Would anybody else like to continue this discussion?

ANONYMOUS: I wonder if one can't describe Sade, as a sacred being who is irritated by his own damnation; and when he seeks his characters' deaths in tortures isn't it that he finds that an ordinary death, the death of a bourgeois in his bed, is a profane death, and that he tries to make it sacred by surrounding it in torture, plunging these beings into the fire, or else behaving as some did during the war: we have plunged entire peoples into the crematorium, we have strewn towns with atomic bombs like at Hiroshima as Bataille writes in a recent edition of *Critique*.[126]

What I want to ask then is this: isn't Sade the sacred, irritated by his becoming profane?

BATAILLE: I don't think Sade cared about being either sacred or profane. In any case, if there is any life left in the notion of the sacred, Sade perfectly captured it. The essentials, it seems to me, are given by Sade in this respect, in that he doesn't allow even for an instant that a dispassionate interest can intervene in his unleashings. And it is in this sense that the definition of evil given in *Philosophy in the Bedroom* is the profound condemnation of everything that we have seen the Germans do. Because it is clear that compared to the executions of the Terror that Sade contemplated in *Philosophy in the Bedroom* , Nazi executions responded still more to the images, to the suggestions of Sade. But also, they responded continually to the fundamental objection that Sade made to the executions of the Terror, since from beginning to end, the unchaining of the passions that raged at Buchenwald or Auschwitz was an unchaining that was under the government of reason.

And it is because of this that an opposition can now be made— between, on the one hand, traditional morality represented by Platonism, and on the other hand, that profound, stupefying morality offered by Sade— that can today take on the greatest meaning, and even serve as a landmark in a way that is perhaps definitive.[127]

ANONYMOUS: Perhaps it is a little off the subject, but to what extent do you think that the civilisations to which man devotes himself are the

caricature of the madnesses that he resists?

BATAILLE: It is very difficult to reply. I don't know in this sense if Buchenwald can be considered to be a caricature of *One Hundred and Twenty Days*. The word "caricature" is a little limited perhaps.

THE SAME: I'm not thinking of Buchenwald exactly, but of societies, of civilisations yet to come, as well as of communist society.

BATAILLE: It is very difficult for me to speak of a society that doesn't exist.

THE SAME: But nevertheless it is developing!

BATAILLE: It is developing. Nobody, not even Soviet communists themselves, would claim that communism exists to any degree.

THE SAME: Potentially, up to a certain point.

J. WAHL: I do not see how your formula can be easily applied.

THE SAME: Nevertheless, since the call to accomplish the communist society requires other calls to a certain unchaining of the passions which can go quite beyond the realisation of that society; I would say that there comes a time when a blockage is created, when these passions are guillotined.

BATAILLE: It seems quite impossible to me for a society to exist that would admit into its breast a multitude of Sades each as free as the other. This time it is not me who makes the objection. I say that it seems difficult that such a society could exist. I would do nothing in any case to prevent its arrival, and I consider that one would be in breach of the most profound morality by doing anything that would prevent its realisation.

ANONYMOUS: M. Bataille can you explain what you meant when you said: "God is dead, and it is difficult to be more dead?"

BATAILLE: This cannot be explained!

J. WAHL: Surely we can discuss the "more dead."

BATAILLE: It is legitimate, even in a talk, to sometimes allow the intervention of a poetic absurdity; this one is quite poor.

ANONYMOUS: Do you consider Malraux's unchaining of action to be a caricature of the unchaining of the passions that you are describing?

BATAILLE: In any case the word "caricature" strikes me as being unwarranted in this instance.

THE SAME: It seems to me that one can draw out as a conclusion the idea that there is nothing more radical than the unchaining of the passions.

BATAILLE: In effect.

THE SAME: On the other hand, it seems that through action, Malraux went far enough in intensity when losing himself in a very distinct passion. It seems to me that this is superior to what can result (*peut aboutir*) from the pure passion that you recommend (*préconisez*); so long as, according to Malraux, it maintains a means of creation.

BATAILLE: It is possible that from the perspective of reason, which is perhaps the perspective of communism, Malraux goes wrong by allowing the intervention of passion. For at a given time Malraux announces the divorce between reason and passion, and it seems to me, at the moment, to end in confusion.

THE SAME: I don't want to defend Malraux, but I think that action constitutes a third term that you have completely ignored. You opposed reason to passion, but what is most opposed to passion perhaps, is action.

BATAILLE: I attributed a certain importance to the fact that action, which is not perfectly reasonable, which as a result of being subordinated to passion, is an action which cannot lead to anything.

THE SAME: You would be able to avoid unrestrained passion. It is a question of reason; all the same, perhaps there are more profound impressions in reason.

BATAILLE: It is clear to me that history is made up of distortions similar to the ones that you have made of what I said.

THE SAME: If the unchaining of the passions is the ultimate, is it all the same historically if one doesn't follow it?

BATAILLE: It is quite difficult to speak on this point, because in the end, if passion is really unleashed to such a point that it is possible to have spoken about *One Hundred and Twenty Days*, well, we are situated so far beyond such a conversation that we cannot free ourselves of evocations that are really out of place, as soon as one speaks for example in a meeting; already when one is alone with oneself, it is not so easy.

THE SAME: Finally actions occur in Sade's work that are powerful enough, even bloody enough, which are I think not lacking in a certain grandeur; and it is precisely in this purely positive sense, that he unleashes passion.

BATAILLE: It seems to me that to the extent to which they have this grandeur, they are not exactly what they would like to be, at least they haven't sought that grandeur for its own sake, and that they are, however, subordinated to that grandeur, to the government of reason. Wasn't this the same minimum of the government of reason that was possessed by Hitler.

All action bears a profound weakness, and you have two options: either, it claims to carry out an act of reason, and in this case we no longer speak of passion; or it is a pretence destined to liberate passion, and in this case passion finds itself morally under the government of reason to which it is foreign. And this is the deep meaning of everything that I have said this evening, and it is what makes action seem impossible to me, since one has not separated it entirely from passion. And perhaps for that reason, action is, like everything else human, immediately placed before the category of the impossible.

THE SAME: On the subject of reason, the rather shabby appearances which you have given it are, all the same, those that are transcended in the work of someone like Kant, and precisely in the moral sphere. And one can see something here: Kantian reason, by its rigor, by the kind of sacred in which it reflects itself, ends up postulating God. As a consequence, the passage of God to reason does not prevent a return to God by reason itself, reason itself is almost irrational and surpasses itself in its assumptions.[128]

BATAILLE: I would like to learn from that rather than reply.[129]

J. WAHL: What one can say, is that, when reason appeared in Heraclitus' work, when he used the word "logos," it bore some characteristics that one could call profoundly irrational. The two are more united, and "logos," at its birth, is more contradictory. So, what you have criticised is reason in a particular epoch.

BATAILLE: Yes. There is, in the fact of the birth of reason, in its relationships with transcendence, connections which are infinitely difficult to sever. It is perhaps at the heart of one of the most difficult philosophical questions, and especially so because it can only be resolved historically, and this presupposes knowledge that I do not possess.

J. WAHL: If nobody has anything else to say we can end the meeting.

NOTES TO INTRODUCTION

[1] All references in this thesis are given in the text by author, publication date of the edition used, and page number. The only exceptions being references to collected works eg. Bataille's, where the date is dropped in favour of volume and page number; or else in the case of authors, to whose work there is a standard scholarly method of reference that eschews page numbers eg. most of Nietzsche's works are referred to by section number, and Spinoza's *Ethics*, to which reference is made by Part, Proposition, Scholia etc, according to Edwin Curley's scheme, and his letters that are referred to by number. Finally documents from the WWW are, of necessity, unpaginated.

Where two numbers are given in a reference they refer to the French followed by the standard English translation. In some instances, I have only given one reference, this is either where only one or the other version was available to me, or else in cases where I have made my own translations, owing either to unavailability, nonexistence, or more rarely to the inadequacy of the extant standard translation, I have usually indicated this. As for other works, where the only reference given is to a French edition, it can be assumed that the translation is my own, this is especially the case with regards to the largely and scandalously untranslated work of such authors as Alliez, Châtelet, Simondon, and Stengers. Fortunately for Anglophone readers, major works by the latter two are currently in translation and will be available soon. Hopefully, the availability of such work will encourage the more widespread exploration of the possibilities for thinking that these writers provoke, and will facilitate a leap beyond the current frozen image of continental philosophy. This thesis is offered as a small contribution to the spread, in the Anglophone world, of the renewed materialism embodied in these writers.

[2] To the best of my knowledge Bruno has *never* been discussed in relation to Deleuze, at least not in print, whilst Schelling crops up only very rarely.

NOTES TO CHAPTER I

[3] In the translation of this piece published in the volume *On the Line* (New York: Semiotext(e), 1983), the phrase 'agencement de désir' is rendered as 'arrangement', I have replaced this with the more customary, and more machinically precise term 'assemblage'. In *Anti-Oedipus* Deleuze and Guattari frequently used the term 'desiring-machine', however, because of the manner in which it leaves itself open to a subjective interpretation this term was replaced by 'assemblage' in *A Thousand Plateaus*.

References

[4] Note that a diagram, when presented in this way, is an immanent counterpart of a Kantian schema: the latter imposes a logical order from the outside, the former follows forces immanent to that which is studied.

[5] Deleuze, and Deleuze and Guattari's, work contains numerous critiques of the work of their contemporaries, most of them— like the two that we have already pointed to in this chapter are by allusion— others, are direct, principally that directed at Lacan in *Anti-Oedipus*. Most of the allusory ones are, I would claim, directed at Derrida, take for instance that to be found in 'Introduction: Rhizome'. "To attain the multiple, one must have a method that effectively constructs it; no typographical cleverness, no lexical agility, no blending or creation of words, no syntactical boldness, can substitute for it" (Deleuze and Guattari 1980/87 33/22). All of these could be said to appear to varying degrees in Derrida's work, his *Glas* (1974) being a case in point, displaying typographical cleverness, and the blending and creation of words, in abundance.

[6] This gives us an opportunity to point out one of the major breaches between Deleuze and Guattari's critique of 'modernist' texts and those deriving from Derrida and Lacan. I shall use as an example, the self-confessed Lacanian-Hegelian, Slavoj Zizek's encapsulation of the Lacanian reading of the structure of Freudianism. Zizek recounts a story about Freud taking a walk in a subterranean cave system, in the depths of which he encounters "another visitor to the caves, Dr Karl Lueger, Mayor of Vienna [...] a notorious anti-Semite", he tells us, portentously, that we must be attentive to the fact that in German, the name 'Lueger' "immediately associates with *Lüge*, a lie". The meaning of this story,according to Zizek is that it goes against the "obscurantist New Age approach according to which, upon penetrating the ultimate depth of our personality, we discover there our true Self, to whom we must open ourselves", and instead shows, that implicit in Freud is the argument that "what we discover in the deepest kernel of our personality is a fundamental, constitutive, primordial *lie*, the *proton pseudos*". For Zizek, and he argues Lacan, this contraindicates the Foucauldian, and also DeleuzoGuattarian, "insertion of psychoanalysis in the line of development that begins with the Christian practice of confession" (Zizek 1996 1). The problem with Zizek's argument is that, from our perspective, it is not what is discovered by psychoanalysis— the primordial truth or lie— that constitutes it as a part of confession, and later of the apparatus of the State, but the very presumption that there is anything to find in the first place. Hence it is the structure of psychoanalysis that we object to, its presumption that there is an originary plenitude/absence to be discovered in the first place— not what it finds there. It is therefore in its claim to holding the key to truth.

References

[7] For a magnificent account of Millenialist movements throughout history see Norman Cohn's *The Pursuit of the Millennium: Revolutionary Millenarians and Mystical Anarchists of the Middle Ages*.

[8] Alison Coudert has argued that an early version of this thesis entered the philosophical tradition with which we are concerned via the "practicing alchemist and [...] Lurianic Kabbalist" (Coudert 1995 95) Francis Mercury van Helmont's influence on Leibniz. Coudert's book provides incontrovertible evidence that Leibniz was profoundly influenced by van Helmont, and over a considerable period of time, she demonstrates that key Leibnizian ideas were derived via van Helmont from Kabbalist and alchemical ideas, suggesting for example that his monadology draws on alchemical notions about 'seeds' and the 'flower' of substances, from Neoplatonic and Kabbalist theories of emanation. On the point at hand here, she argues that "Van Helmont rejected the common view of time as a continuum of infinite indivisible moments or points of duration [...] in his view time was not an absolute concept. It was relative and intrinsic to each individual. Van Helmont consequently arrived at the idea of 'biological time' which proved so useful for later biologists" (Coudert 1995 97), including, as we shall see in chapter three, Jakob von Uexküll.

[9] Pierre Zaoui: "Deleuze says in the course of an interview regarding his work in the history of philosophy that 'Everything leads towards the great-identity Nietzsche-Spinoza'" ("Deleuze au cours d'une interview, à propos de son travail en histoire de la philosophie: 'Et tout tendait vers la grande identité Nietzsche-Spinoza'"), Zaoui 1995 65. Zaoui is quoting Deleuze 1988c.

[10] See the survey of such positions by Peter Landsberg in his paper 'From Entropy to God?'.

References

[11] Smolin is one of those physical scientists (at the time of publication of his book, *The Life of the Cosmos*, he was Professor of Physics at the Center for Gravitational Physics and Geometry at the Pennsylvania State University) who make frequent appearance in this thesis and whose very existence provides empirical difficulties for the work of Alan Sokal and Jean Briqmont who recently attracted much media attention for their attacks upon the use made by a series of French philosophers of examples, concepts, and arguments from the physical sciences, usually in the defence of some form of social constructivism. Smolin's work is interesting for a host of reasons, but we need only mention here the proximity of his overall view of cosmology to the philosophical positions espoused in this thesis, and his omnipresent enthusiasm for, and granting of, a prominent place to, the style of philosophy advocated here. Of interest principally are, his thorough critique of the Platonic background of most orthodox scientific thought, leading him to an ontological and epistemological position close to the Nietzschean perspectivism that we will encounter in several places below; and for his key statement of relationality "the world is a vast interconnected system of relations, in which even the properties of a single elementary particle or the identity of a point in space requires and reflects the whole rest [sic] of the universe" (Smolin 1997 221). This by no means exhausts the points of convergence.

[12] Two thorough studies of Nietzsche's relation to Boscovich are Whitlock (1996), and Stack (1983) chapter nine. Whitlock's two excellent articles assess and explicate the role played by Nietzsche's not inconsiderable understanding of the physics of his day upon his central philosophical concepts. His focus is on the influence of the Dalmatian physicist Roger Joseph Boscovich on Nietzsche (critically for the interpretation of Nietzsche in this thesis, Whitlock also emphasises the Spinozist elements of the eternal return, for which see also Yovel's fine study, 1988). Whitlock's principal point is to show that Nietzsche derived from Boscovich, a radically relational or intensive view of matter, *pace* that espoused in this thesis and attributed to Deleuze and Guattari. Interestingly, Alison Coudert, whose fascinating work on Leibniz we have already encountered, argues that Leibniz had arrived at a position in which matter was to be treated as a "complex of forces. In this he was anticipating modern field theory, which treats material particles as concentrated fields of force— an anticipation duly recognised by its founder [...] Ruggiero Giuseppe Boscovich" (Coudert 1995 97).

References

[13] On these and related questions see L. Ropolyi's excellent essay 'Thermodynamic Elements in World Views– World View Elements in Thermodynamics' in *Thermodynamics: History and Philosophy. Facts, Trends, Debates*, pp 424–38. Ropolyi convincingly demonstrates that even the most fundamental concepts eg. entropy, equilibrium, work, extensive and intensive qualities, are subject to almost total disagreement, based upon this he programmatically concludes that "Thermodynamics is a science in crisis and a science of crisis." Martin Barrett and Elliott Sober for example have suggested that "entropy is not simply a technical system applying to closed gas chambers, but has a larger meaning as a measure of organisation and order". To reinforce this point one might also survey the debate in biology concerning the import, interpretation and structure of the second law, see *inter alia* Daniel R. Brooks and E. O. Wiley, *Evolution as Entropy: Toward a Unified Theory of Biology* (Chicago and London: The University of Chicago Press, 1988), Bruce H. Weber, David J. Depew, and James D. Smith, *Entropy, Information, and Evolution: New Perspectives on Physical and Biological Evolution* (Cambridge, MA and London: The MIT Press, 1988). In addition to this, one can examine the widespread use of tropes from thermodynamics across a wide range of social commentators, writers and artists from Henry Adams, and Spengler, to Freud, to the novelist Thomas Pynchon (in particular in his magnum opus *Gravity's Rainbow*, and his short story 'Entropy'), and in the work of the artist Gordon Matta-Clark.

[14] Simondon's contribution to the critique of hylomorphism is dealt with in greater detail in chapter two. It will suffice here to note that the account of singularity currently under consideration and its use of the concepts of the membrane, limit, and topological surface is explicitly drawn from Simondon. Bear in mind also that Simondon is one of the first French philosophers of cybernetics, and correspondingly one of the first to write philosophically on modern thermodynamics, these two being intimately entwined.

[15] This line of thinking is elaborated in Stuart A. Kauffman's work in *The Origins of Order: Self-organisation and Selection in Evolution* (Oxford: Oxford University Press, 1993).

[16] Leon Brillouin, *Science and Information Theory* (Academic Press, 1962). See also Lila Gatlin, *Information Theory and the Living System* (New York: Columbia Press, 1972).

References

[17] The relationship between Deleuze and Guattari and Prigogine and Stengers has been adequately mapped by James Flint in his 'Mapping the Plane of Consistency', and I shall not attempt to repeat it here. Note though that their relationship was one of both personal friendship and intellectual solidarity, and that the original French version of this book contains not inconsiderable references to Deleuze and to Michel Serres (the references to the latter alone have been carried over into the English translation which differs considerably from the French, to the detriment of a solely Anglophone readership). In a recent interview about his work, including its relations with that of Deleuze, Prigogine has said that he considers the term 'repetition' to be coextensive with the time-reversible frame (that of dynamics), while 'difference' is coextensive with the time-irreversible perspective (that of thermodynamics, and complexity).

References

[18] As Prigogine informs us (Prigogine and Stengers 1984 153-6, Prigogine 1997 66-7) this result was only proved by the Belouzov-Zhabotinsky reaction in the early 1960 s. This experiment, a complex demonstration of regular chemical oscillation, showed that when matter is pushed to the limits of it stability it begins to self-organise into new and novel forms. It is the empirical basis for Nietzsche's world "eternally changing, eternally flooding back, with tremendous years of recurrence, with an ebb and a flood of its forms; out of the simplest forms striving toward the most complex, out of the stillest, most rigid, coldest forms toward the hottest, most turbulent, most self-contradictory" (Nietzsche 1968 § 1067). This experiment, and related research programmes on different strata give rise to a concept that I would call, 'creative instability'. Another, seemingly unrelated, theory is that of punctuated equilibrium, developed by Niles Eldridge and Stephen Jay Gould, as a challenge to the gradualism implicit in orthodox Darwinian evolution. The theory in brief suggests that the evolutionary history of most species is characterised by long periods of stability, punctuated by calamitous changes. Such events or instabilities can lead to one or several species undergoing rapid transformation or even extinction, and then the onset of a long period of stability or equilibrium. The classic example of this, of course, is the extinction of the dinosaurs as a result of the impact of an extraterrestrial object. Research into these issues has led to a revitalisation of the tradition of catastrophism (Huggett 1997) in the earth sciences, and poses "the greatest challenge to Darwinian gradualism" such that "catastrophe replaces the linear temporal creep of microevolution with nonlinear bursts of macroevolution" (Davis 1996 75). As such, this is a science that fully opens the Earth to what Deleuze calls the 'forces from the outside' (we return to these forces in more detail in chapter two). This research seems to relate directly to at least two distinct DeleuzoGuattarian themes, and illustrates the very serious challenge that their work poses to orthodox philosophy of science: i) their critique of Darwinian linear evolution and its replacement with creative involution; ii) their development of concepts of external metastable milieus and singularity as concepts of individuation.

References

[19] The elements of a thermodynamic or energetic economics are contained in sources as diverse as Rosa Luxemburg, Georges Bataille's *Accursed Share*, and two magnificent and obscure studies: Nicolas Georgescu-Roegen's *The Entropy Law and the Economic Process* and Alf Hornborg's 'Machine Fetishism, Value, and the Image of Unlimited Good: Towards a Thermodynamics of Imperialism'. Like Deleuze and Guattari's, Georgescu-Roegen's work rests on a thorough critique, and definitive rejection, of the nature-culture distinction and its replacement with what DeleuzeGuattari call the machinic phylum, a commitment to understanding the world as a single plane of consistency, a single matter, organised in multiplicitous ways. This is a commitment to a complete overcoming of anthropocentrism by the adoption of, a biocentrism by Georgescu-Roegen and Vernadsky, DeleuzeGuattari's geocentrism, or Bataille's general economy (a concept, incidentally, that Bataille may have derived from Vernadsky's use of it in *The Biosphere*), concerned with the study of "unformed matter" which is "not dead, brute, homogeneous matter, but a matter-movement bearing singularities or haecceities, qualities, and even operations" (Deleuze and Guattari 1980/87 638/512). Georgescu-Roegen describes his work as an attempt to show that thermodynamics "is the foundation of a physics of economic value [...] the Entropy Law is by its very nature the most economic of all the physical laws" (Georgescu-Roegen 1995 83), his work represents an empirical study of the flows of matter and energy over the body of the "immanent unity of the earth" (Deleuze and Guattari 1980/87 171/146), and as such it is the realisation of Bataille's project. Whilst Georgescu-Roegen, perhaps not surprisingly, doesn't refer to Bataille, both have something very important in common: both were inspired in their heterodox economic endeavours by the work of Vladimir Vernadsky, a figure whose work we will return to at several points throughout this thesis. Jacques Grinevald, who has done more to publicise this scandalously overlooked tradition than anyone else, writes in his introduction to a recent French edition of Georgescu-Roegen's writing that, apart from being a "nonconformist and heterodox economist, a scientific dissident" he was "one of the rare theoreticians of economic development to have taken seriously the idea— sustained in the inter-war years by Lotka, Vernadsky, Teilhard de Chardin, and Edouard le Roy— that with industrial civilisation, man has become a veritable geological agent, one of the most powerful forces in the living world at work in the transformation of the face of the Earth" (Jacques Grinevald in Georgescu-Roegen 1995 1, 13). As well as advocating Georgescu-Roegen's work, which he names a 'bioeconomics', Grinevald has also written the introduction to the new edition of the founding work in this area, Vernadsky's *The Biosphere*.

References

[20] To locate energetics in Freud is not of course a move unique to DeleuzeGuattari, it is to be found in the other works of libidinal economics, principally Lyotard's *Libidinal Economy* and Baudrillard's attempts in *Symbolic Exchange and Death*. These latter texts were exhumations of the work of Siegfried Bernfeld, who had made a study of this element of Freud's work in his 'Freud's Earliest Theories and the School of Helmholtz'. In the fifties Lacan applied himself to excavating Freudian energetics, the pertinent papers are 'The Symbolic Universe', 'Materialist Definitions of the Unconscious', 'Homeostasis and Insistence', 'Freud, Hegel and the Machine', 'The Circuit'. All are collected in *Seminar II: The Ego in Freud's Theory and in the Technique of Psychoanalysis, 1954-5*. As Freudianism territorialised itself into a statist therapeutic apparatus all mention of energetics in general and the death drive in particular became strictly *verboten*. See also Guattari's comments in 'Les énérgetiques sémiotiques' the second chapter of his *Cartographies schizoanalytiques* (Guattari 1989). Guattari comments that with the subordination of the triad Unconscious-Subconscious-Conscious to Id-Ego-Superego (the shift from dynamic to the topographic), Freudianism shifted its ground from an energetic to an anthropomorphic model. In Lacan's case he notes that initially libido was taken to be a "simple system of energetic notation", but shifts to declaring "la thermo-dynamique à n'être elle-même qu'un jeu de signifiant". A useful secondary study in this respect is Rosenberg 1993.

References

[21] One of the examples that Stengers gives to illustrate her sense of the term 'invention' is particularly relevant here, it is that of the birth of thermodynamics in Carnot's work on the heat cycle. She writes that the immediate backdrop to the Carnot cycle is lodged in three distinct 'lineages-disciplines' or assemblages, the latter defined by her as a complex of "object/representation/practice" (Stengers 1997c 205): that of theoretical studies of the outputs of engines and of heat, and of empirical technical studies on the outputs of steam engines. From this background she writes: "Carnot *invents* a relationship that was not contained in any of these three lineages-disciplines and creates a new theoretical object, unexpected by any of them; unexpected for mechanics since one passes from the usual conversions between kinetic and potential energy to quite different energetic conversions, which imply a change in the state of matter; unexpected for the specialists of heat since its specific dimension of dissipation is systematically eliminated in the cycle that is represented as subjected to laws analogous to the reversible laws of dynamics; unexpected for the engineers who find themselves offered, as a model, an engine with zero productivity" (Stengers 1997c 207). Using this schema we could understand Marx's study of "the capitalist mode of production, and the relations of production and forms of intercourse that correspond to it" as the invention of such an object of study with its concerted attempt to comprehend "the economic law of motion of modern society" (Marx 1976 90-2). Following Stengers we could understand what Lenin calls the "three main ideological currents of the nineteenth century" as the relevant lineages-disciplines that precursed Marx's work, that is "classical German philosophy, classical English political economy, and French socialism" (Lenin 1967 I 7). An analysis produced in this way would be far more rigorously materialist than Lenin's own which is little more than an exercise in intellectual history. The ideological currents of Lenin's analysis would become machinically interlocked assemblages of political power, international political dynamics, technical study and research.

References

NOTES TO CHAPTER II

[22] Simondon's primary work and the one upon which we shall draw most is *L'individu et sa genèse physico-biologique*. This is a reprint of the 1964 edition and includes some important additions: an extra chapter and some supplements. The only text by Simondon yet published in English translation is the introduction to this latter work under the title 'The Genesis of the Individual'. It was also reprinted as the first part of the introduction to Simondon's *L'individuation Psychique et Collective*, under the title 'Position du problème de l'ontogenèse', the second part is 'Concepts directeurs pour une recherche de solution: Forme, Information, Potentiels et Métastabilité'. These two books together comprise a partial reprint of Simondon's Doctoral thesis 'L'Individuation à la Lumière des Notions de Forme et d'Information'. The English translation of *L'individu et sa genèse physico-biologique* is due to be published by Zone Books in 2000; I have also heard of plans to publish a translation of *L'individuation Psychique et Collective*.

[23] As a historical point it is worth noting that Simondon was critical in introducing cybernetic research into France and gave a major paper at the first French conference to be organised for the benefit, and in the presence, of Norbert Wiener. The proceedings of this significant event are published as *Le concept de l'information dans la science contemporaine*, ed. by Louis Couffignal (1965).

[24] In the most extensive discussion of Butler in *Anti-Oedipus* (338/284) he is credited with "shattering the vitalist argument by calling in question the specific or personal unity of the organism, and the mechanist argument even more decisively, by calling in question the structural unity of the machine". In addition to which, Butler encounters the crucial concept of surplus value of code, in which "a part of a machine captures within its own code a code fragment of another machine, and thus owes its reproduction to a part of another machine".

[25] See Stengers *Cosmopolitiques 6: La vie et l'artifice: visages de l'émergence*, p. 123 n. 15, and Gilles Châtelet 'Du Chaos et de l'Auto-Organisation comme Néo-Conservatisme Festif'. An expanded version of this paper has been printed in Châtelet's recent book *Vivre et penser comme des porcs: de l'incitation à l'ennui dans les démocraties-marchés*.

References

[26] Steven J. Heims (1991) gives a clear and politically astute account of the collusion between the founders of Cybernetics and the American military-industrial complex, showing for example how Cybernetics research was tied institutionally and financially to weapons research. More recently, the origins of the internet in the development of a networked computer system, the ARPANET, for the American military have been widely demonstrated by, amongst others, Manuel De Landa (1994).

[27] As a technical term in virology, transduction is defined as the process in which "a virus takes up a piece of DNA from its bacterial host and incorporates it into its own viral genome. After the virus has multiplied, many copies of the virus erupt from the infected cell [...] Transduction by virus works in eukaryotic organisms as well. The discovery that large blocks of genetic instructions can be swapped and transferred among creatures is a clue that the insertion of new genes could be the mechanism behind evolution. If viruses can transfer eukaryotic genes across species boundaries, and can install their own genes into their hosts, the case for the new mechanism is even stronger." Processes such as this are entirely inexplicable by autopoietic theory, which cleaves to a paranoid model of self-preservation of the pure autonomous entity, and go towards a strengthening of the cases both for Deleuze and Guattari's parallel to Lynn Margulis' symbiogenetic challenge to Darwinian evolution by pure filiation and lineage; and to a theory of constitutive heteronomy, or machinic surplus value. Tying these two areas together DeleuzeGuattari write: "the living thing has an exterior milieu of materials, an interior milieu of composing elements and composed substances, an intermediary milieu of membranes and limits, and an annexed milieu of energy sources and actions-perceptions. Every milieu is coded, a code being defined by periodic repetition: but each code is in a perpetual state of transcoding or transduction. Transcoding or transduction is the manner in which one milieu serves as the basis for another, or conversely is established atop another milieu, dissipates in it or is constituted in it" (Deleuze and Guattari 1980/87 384/313).

[28] See also Gilles Châtelet, *Les enjeux du mobile: mathématique, physique, philosophie.*

[29] DeleuzeGuattari refer to the Biblical book of Numbers, as the place in which the Hebrews discover the connection between nomadism and numbers, a connection made clearer when the Hebrew title of the book is literally translated: *Bemidbar*, in the desert.

References

[30] The same source is cited for the etymological argument in both *Difference and Repetition* and *A Thousand Plateaus*, that is Emmanuel Laroche, *Histoire de la racine 'nem' en grec ancien,* where it is argued that in pre-Solonic Attica *nomos* referred to a distribution of arable land that did not involve division of space into allotments but rather the scattering of livestock across that land, hence the *nomos* designated an "occupied space, but one without precise limit", as such there was a distinction between the polis (controlled by *logos)* and the exterior subject to *nomos*. All of these distinctions play a critical role in the procedures of both *Difference and Repetition*, and *A Thousand Plateaus*, principally in the opposition of Riemannian topological smooth space to the Euclidean geometry of the striated. Such a distinction is fundamental to Simondon's rejection of Euclidean models in the realm of the living "the cortex cannot be adequately represented in a Euclidean fashion" (Simondon 1995 225). This conceptual continuity is further ammunition to be used against those who would claim a clear breach between the Deleuze of the partnership with Guattari, and the Deleuze of the early, sole authored, 'academic' books.

[31] I have translated this into English from the French translation by Charles Appuhn (Flammarion), in a way that is more akin to the Spinoza used by DeleuzeGuattari. As has been noted elsewhere, principally by Antonio Negri in his work on Spinoza, the French is far clearer than the English on this point, having a more direct relation to Spinoza's Latin. The obvious example where this becomes pertinent is around the Spinozist distinction between two types of power: *pouvoir* (potestas), and *puissance* (potentia). A distinction lost in English. Subjectively, I have found that it is only through reading Spinoza in French (presumably the effect is multiplied on an exponential scale in Latin) that one is able to grasp the *potentia* of the Spinozist challenge.

[32] These points are made in the chapter entitled 'Newtonian and Bergsonian Time' in Wiener's *Cybernetics: or Control and Communication in the Animal and the Machine*. As a side issue it is worth noting that Joseph Needham, in 'The Book of Changes and the Binary Arithmetic of Leibniz', in volume two of his magisterial multivolumed study of *Science and Civilisation in China*, notes that it is due to Leibniz' deep study of Chinese civilisation that one can say that cybernetics has Chinese roots, *vis* "although Chinese civilisation could not spontaneously produce 'modern' natural science, natural science could not perfect itself without the characteristic philosophy of Chinese civilisation", (Needham 1962 340).

References

[33] It was only after formulating this sense of Simondon's proximity to Spinoza, in spite of himself, that I discovered a very similar argument in an article, that I have had occasion to discuss earlier, by Etienne Balibar. Balibar writes that "I was surprised to discover that specifically this term [transindividuality, EA], with a full definition and theoretical implementation, has been used by [Simondon] My surprise was even greater when I realised the extent to which Simondon's arguments in fact are truly Spinozistic, literally converging with some basic propositions of the *Ethics*" (Balibar 1993 10). Balibar then goes on to note, as I have, Simondon's own "rather conventional" rejection of Spinozism.

[34] Stephen Brush is somewhat more catholic in his interpretation of the scope of the second, 'probability revolution' giving it a much rider range in both time and scope, he writes: "The first Scientific Revolution, dominated by the physical astronomy of Copernicus, Kepler, Galileo, and Newton established the concept of a 'clockwork universe' or 'world machine' in which all changes are cyclic and all motions are in principle determined by causal laws. The Second Scientific Revolution, associated with the theories of Darwin, Maxwell, Planck, Einstein, Heisenberg,and Scrödinger, substituted a world of process and chance whose ultimate philosophical meaning still remains obscure." (Quoted in Depew and Weber 1996 330).

[35] See Paul Bains' use of this, and related material, in his 'And if one day the brain became inobjectifiable'.

NOTES TO CHAPTER III

[36] Félix Guattari gives an extremely clear, indeed programmatic, statement concerning machinic thinking and its distance from both phenomenology and logic in 'Les propositions machiniques' in his *La Révolution Moléculaire*, p. 355. An abridged English translation of this book does exist but it is so inaccurate, such a poor edition, that I have chosen not to give references to it. Eric Alliez' *De l'impossibilité de la phénoménologie* is an essential map of the current French philosophical scene showing very clearly how Deleuze and Guattari's work is based on entirely different predicates of that of the bulk of their contemporaries, at the same time it is an expert demolition of the very possibility of phenomenology, and a demonstration of the need for, and possibility of, thinking in entirely other ways.

References

[37] This is chapter eleven of *Expressionism in Philosophy: Spinoza*. The French title of the book is far clearer as to its intention, that is *Spinoza et le problème de l'expression*. The theme of the identity of expression, elsewhere called production or constructivism in DeleuzeGuattari's work, with immanence is developed throughout this thesis, in particular in the sections dealing with Giordano Bruno.

[38] See Robert Rosen, *Life Itself: A Comprehensive Inquiry into the Nature, Origin and Fabrication of Life*, and Nicholas Rashevsky, 'Topology and Life: In Search of General Mathematical Principles in Biology and Society'.

References

[39] Deleuze and Guattari define a *regime of signs* as "any formalisation of expression [...] at least where the expression is linguistic" (Deleuze and Guattari 1980/87 140/111); the importance of the introduction of such terms is that it marks one of the principal routes by which Deleuze and Guattari distinguish themselves from the rest of the French philosophical scene. This is elegantly, albeit negatively, marked by an essay, stunning in its uselessness as a discussion of Deleuzian philosophy, but useful in stating the breach opened up between Deleuze and his erstwhile contemporaries. I refer to Jean-Luc Nancy's 'The Deleuzian Fold of Thought' in which he acknowledges that "Deleuze's thought is so far removed from the sources, schemata and modes of conduct which, for me, are those of philosophical work" and insistently "within my tradition", (Nancy 1998/96 115/107). Establishing a clear and distinct breach between the work of Deleuze and Guattari and the rest of the French philosophical scene (and for what it's worth, the British establishment of an image of thought for Continental Philosophy) is one of the tasks implicit in this thesis. Alliez' work (1993, 1995) in this area is of course exemplary in its invention of a Deleuzian counter tradition, this work must exceed the discursive formation of 'history of philosophy' and even of genealogy to invent singularities, thought events that can explode the present time of philosophical actuality— as is common to that line of thinkers of a materialism in which thought sediments itself as a material force, following Bruno, Spinoza, Marx, Reich, Bataille, up to and including Deleuze and Guattari. A philosophical heresiology. Most, principally deconstruction inspired, philosophy that claims to exceed the Greek inheritance, the *logos*, then. is shortcircuited from the start by the irrevocable indebtedness of the sources used precisely to that tradition (Lévinas' stated aim is precisely to fold Judaism back into Western thought, into sacred history), and their failure to comprehend the extent to which philosophy is dominated at the deepest and most profound levels by the politico-theological complex, Control. In order to genuinely break from that tradition requires a rethinking of a kind that has not hitherto been attempted, and one of its principal resources will be in a sense a revocation of Casaubon's 1614 redating of the Hermetic texts (for two differing assessments of the impact of Casaubon's work on seventeenth century thought and culture see Martin Bernal's *Black Athena vol.I* and Frances Yates' *Giordano Bruno and the Hermetic Tradition*). Hardt and Negri have elegantly illustrated the difference by noting that the tradition that we are following is "in line not with the Judaism of Emmanuel Lévinas, which Derrida seems to prefer, but the heretical Judaism of Spinoza" (Hardt and Negri 1994 330). Deleuze signals his total opposition to the tradition of State thought, his declaration of war, down to the detail of mirroring Schopenhauer's programming of his lectures to clash with Hegel's, by lecturing at Vincennes contemporaneously with Lacan's own seminars in Paris.

References

[40] It is unfortunately beyond the scope of the present chapter to bring these concerns to bear upon the relationships between a DeleuzoGuattarian and a Marxist materialism in the context of stratification in the social domain. There is a further exploration of the relationship in chapter four. Another route to follow would be one in which the principal axis of engagement is with Althusser and Negri's 'aleatory materialism', see Louis Althusser, 'Sur le matérialisme aléatoire', and Antonio Negri, 'Notes on the Evolution of the Thought of the Later Althusser'. Essentially this is an assemblage composed of Deleuze and Guattari's joint and separate works that are specifically concerned with Marxism, and the peculiarly French school of Spinozist Marxism. A good survey of these Marxist "detours" (Althusser) through Spinoza is Tosel's *Du matérialisme de Spinoza*.

[41] This quote is from Deleuze's preface to the English translation of *Difference and Repetition*. Hence the single page reference.

[42] This idea is subject to an extended elaboration in the important twelfth chapter of Deleuze's *Expressionism in Philosophy: Spinoza* and in chapter seven of Antonio Negri's *The Savage Anomaly*.

[43] For an excellent introduction to Uexküll's own work see both T and J von Uexküll 1992; for treatments of Deleuze's relationship to Uexküll see Ansell Pearson (1996), and Bogue (1997).

[44] Deely goes on to show how this line of thought, following the prioritisation of relationality and an immanently creative matter, permits the development of the relatively new field of biosemiosis. The 'Actor Network Theory' which is "a ruthless application of semiotics [in which] entities take their form and acquire their attributes as a result of their relations with other entities. In this scheme of things entities have no inherent qualities: essentialist divisions are thrown on the bonfire of the dualisms" (Law) associated with Bruno Latour, Michel Callon and others is yet another cognate development. It would be worth examining Guattari's very prescient papers from the 1960 s where he very clearly adumbrates certain themes that will later be developed in biosemiotics and in various non or anti-Darwinian biologies. Clearly we will have to deal here with the persistent critique of Darwinism that exists in Deleuze's work at least since *Difference and Repetition*. Noone has devoted more time or acuity to Deleuze's complex involvement with Darwinism than Keith Ansell Pearson (see especially his *Germinal Life* 1999).

References

[45] For examples of such texts which are unashamedly theological: Paul Davies *God and the New Physics*; John Barrow and Joseph Silk, *The Left Hand of Creation*; John Barrow and Frank Tippler, *The Cosmological Anthropic Principle*; Arthur Peacocke, *God and the New Biology*; Paul Davies, *The Mind of God. Science and the Search for Ultimate Meaning*. Countless others such as Roger Penrose are more surreptitious, making the theist move by an adherence to a remarkably unmediated Platonic theory of forms to account for, in Penrose's case, mathematical objects. For a critique of the latter, coupled with an attempt to found a corporeal, materialist mathematics that avoids the unexamined mentalism of constructivism (mathematical *stricto sensu* rather than philosophical), and that aims to "shuck Platonism off in the end as a theological obfuscation of 'number'" see Rotman 1993 *passim*.

[46] See also Isabelle Stengers 'Introduction' to *L'effet Whitehead*, pp. 9—11 for commentary on the relationship between this aspect of Whitehead's thought and that of DeleuzeGuattari.

[47] This tendency in science can be seen in such popular figures as Hawking Lewis Wolpert, and Steve Jones who simultaneously arrogate to themselves the rôle of providers of a 'philosophy' to justify their scientific claims, and in those philosophers, of Heideggerian inspiration, scornful of a supposed 'scientism' in philosophy, the most extreme of whom will claim that philosophy has nothing to learn from or say to science. To the latter one can only repeat Nietzsche's critique, aimed at the Kantianism of his day, that: "Philosophers wish to flee from science, but it pursues them. One can see where their weakness lies: they no longer lead the way, because philosophy itself is merely science and is gradually turning into nothing but professional border patrolling" (Nietzsche 1990b 112, but also 1974 § 344, 1983 188 for a similar argument), of which the editor rightly notes that "this conception of philosophy is more wide-spread today than it was in the 1870's" in both its 'Analytic' and 'Phenomenological' varieties.

[48] The essays collected in Isabelle Stengers *Power and Invention: Situating Science*, constitute a powerful statement of the sense of *invention* suggested here.

[49] Gilles Deleuze, 'The Theory of Multiplicities in Bergson'. The provenance of this text is hazy. In a personal communication, its translator, Tim Murphy, explained to me that the manuscript containing the text is "apparently a set of notes for an invited lecture to some Society of Philosophy in France, though the coordinates aren't specific. There is no date on the MS. either." An important statement of Bergson's theory of multiplicity occurs in the analysis of number which opens chapter two, 'The Multiplicity of Conscious States. The Idea of Duration', of his *Time and Free Will*, pp. 75—90.

References

[50] Deleuze invites us to compare the citation from Marx with this from Bergson: "The truly great problems are set forth only when they are solved". The quotation from Marx is from *A Contribution to the Critique of Political Economy*. By citing this, Deleuze is endorsing a key part of Marx's philosophy, a question that is right at the centre of all of the debates about determinism in Marx (debates that we are in no position to examine here). The position that I would support, and that Deleuze is indicating, is one that seems to be true to Marx (the dubious value of such a notion of fidelity being accepted in silence). It is summarised in the idea that 'man makes history but not in conditions of his own choosing', this is the formula that needs to be applied to the question of conceptual invention that we are raising here— it avoids both arbitrary subjectivism and mechanistic determinism.

[51] See Antonio Negri *Marx Beyond Marx: Lessons on the Grundrisse*, pp. 47—58 for the constitutive elements of Marx's materialist method, and Karl Marx *Grundrisse: Foundations of the Critique of Political Economy (Rough Draft)*, p. 90 for the reference to Spinoza, and the section entitled 'Consumption and Production', pp. 90—4 for an expansion of this equivalence.

[52] It is the work of such philosophically astute scientists as Rosen, Pribram and Margulis that confirms the truth of Sean Watson's comment that "we dismiss neuroscience, and the biological in general, as the work of epistemologically naive 'technicians' at our peril" (Watson 15). It is not just the philosophical implications of the work of these scientists, but moreover the direction of their own philosophical interests, that gives the lie to the recent outbursts of Sokal and Briqmont, and that exposes the view of science that the latter defend for the reactionary and irrelevant charade that it is.

[53] For an account of the political conservatism of much work in the 'Science of Complexity' see Gilles Châtelet 'Du Chaos et de l'Auto-Organisation comme Néo-Conservatisme Festif', and for a careful study of some of the misuses of the term see Isabelle Stengers 'Complexity: a Fad?', in her P*ower and Invention: Situating Science*, pp. 3—19.

[54] Gilles Châtelet, 'Virtuality and all That', as yet unpublished, hence unpaginated ms.

[55] Herbert A. Simon, *The Sciences of the Artificial*, chapter seven 'Alternative Views of Complexity', pp. 170—81.

References

[56] In the context of my earlier comments on the productive results of forcing a meeting of Spinoza and Simondon, it is perhaps not surprising that it is Balibar who makes this comment. Because it is Balibar, and to my knowledge, Balibar alone, who has also written on Spinoza through Simondonian lenses. See Balibar 1993. In this unique article, he surveys Spinoza's conception of the continual production of the individual, paying particular attention to the role therein of the necessary immanence of relation, and conceives the whole complex as a precursor of Simondon's concept of transindividuality, his "veritable theatre of individuation" (Simondon 1995 25).

[57] Margulis and her son Dorion Sagan state that "No life without a membrane of some kind is known" (Margulis and Sagan 1986 54). Similarly Fritjof Capra, in his exemplary exposition of autopoietic theory, notes that for Maturana and Varela the creation of a limit or membrane is definitive of the living system in that their "autopoietic organisation includes the creation of a boundary that specifies the domain of the network's operations and defines the system as a unit" contrary to catalytic cycles which do not "constitute living systems, because their boundary is determined by factors [...] that are independent of the catalytic processes" (Capra 1997 98).

References

[58] See chapter eleven of *Microcosmos*, 'Late Bloomers: Animals and Plants', in particular the passage on fungi. Elsewhere in this remarkable book, Margulis and Sagan tend towards DeleuzoGuattarian theses, vis. the thorough machinism of their discussion of the virtual impossibility that biologists face in giving a "concise definition of the difference between living and nonliving substance" (Margulis and Sagan 1986 72). It is precisely this nondeterminate difference that is traversed by the machinic phylum as laid out by Deleuze and Guattari (1980/87 414/335) and by Deleuze alone in his *Bergsonism* (1991 101), such that one cannot ask about the distinction between life and matter, but rather two states of matter: "stratified systems" and "self-consistent aggregates". Which as DeleuzeGuattari conclude is cut across by "*a machinic phylum, a destratifying, transversality* [which] moved through elements, orders, forms and substances, the molar and the molecular, freeing a matter and tapping forces". Margulis' biology and DeleuzeGuattari's schizoanalytics converge also in the relationship between on the one hand, Deleuze's theory of contraction and *habitus* sketched out in chapter II of *Difference and Repetition* resulting in the dissolution of the unitary self in favour of the *complicatio* of "thousands of little witnesses which contemplate within us: it is always a third party who says 'me'" (Deleuze 1968/94 103/75) and again in *Logic of Sense* in an analysis of Klossowski's critique of the Kantian-Christian self and the concomitant untenability of any account of the psyche based on phenomenology, "I may be an other, that something else thinks in us [...] because so many beings and things think in us" (Deleuze 1969/90 399/298); this thought is to remain with Deleuze and Guattari up to their last collaborative work, where it is given an inflection that relates it to the inverted vitalism discussed at length elsewhere in my work. They write that "even animism, when it implies little immanent souls in organs and functions, is not so far removed from biological science as it is said to be, on condition that these immanent souls are withdrawn from an active role so as to become solely sources of molecular perception and affection [...] bodies are populated by an infinity of little monads" (Deleuze and Guattari 1991/94 124/130). This philosophical move is coupled to Margulis' empirical confirmation in her, increasingly accepted, thesis that "all organisms of greater morphological complexity than bacteria, that is nucleated or eukaryotic organisms [...] are also polygenomic, having selves of multiple origin [...] comprised of heterologous (different-sourced) genomic systems, evolved from more than one kind of ancestor" (Margulis and Sagan 1997 65). In an article outlining the tenor of the 'new biology', which is, he tells us characterised by its mutually interdependent critiques of i) the dominant monolithic model of the unified body, and ii) the distinction between the plant and animal kingdoms, Dorion Sagan, characterises the eukaryotic cell as an 'assembly', and hence comes tantalisingly, close to Deleuze and Guattari's usage of the concept of the assemblage. Sagan writes: "each eukaryotic 'animal' cell is, in fact, an uncanny assembly, the evolutionary merger of distinct prokaryotic metabolisms. Strictly speaking, there is no such thing as a one-celled plant or animal [...] all

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previous biology has been grossly zoocentric" (Sagan 1992 363). For yet another convergence see Guattari's 'Redondances Intensives et Redondances Expressives' where he writes that "multicellular organisms continue to be colonies, packs of unicellular organisms, living in part by a system of intracoding, and in part by transcoding" (Guattari 1977 336). Guattari's anticipation of the nascent field of biosemiotics is astounding. I take these themes up in more detail elsewhere. Finally, this material takes on another dimension in the context of the critique of ontological unity, see for example Goethe's dicta that "[e]very living being is not a single thing, but a plurality; even insofar as it appears to us as an individual, it still remains a collection of living, independent beings" (Goethe, *Morphologie*, quoted in Stack 168 n. 27), and the influence on, and development of, this line of thought in Nietzsche. An important and incisive survey of these questions from the Eighteenth century onwards can be found in the fifth chapter of Michel Foucault's *The Order of Things*, the sections on 'Monsters and Fossils' and 'The Discourse of Nature' are especially apposite. Elements of Foucault's approach are deployed to great effect in Yoxen's (1981) critical study of the presuppositions of contemporary molecular biology.

[59] Valuable work in this area, concentrating entirely on Simondon's contribution, has been done by Anne Fagot-Largeault in her essay 'L'individuation en biologie'.

[60] See the chapter 'Morphology, Maps and Integrated Tissue' in Kauffman's *The Origins of Order*.

[61] Giordano Bruno's fine description (1998 21) of the philosopher is variously translated as "the true philosopher's country is the world" or else as "to the true philosopher all lands are his own". This comment occurs in a discussion of Bruno's attack on the Oxford Aristotelians and the idea proposed by his interlocutor that one "must not be an agitator in a country not one's own", it is this that evinces Bruno's internationalist response. This idea is of course taken up in the late-nineteenth and twentieth centuries as a watchword of revolutionary internationalism, such that, the revolutionary has no homeland; in the *Manifesto of the Communist Party*, for example, we read that the "working men have no country. we cannot take from them what they have not got".

References

NOTES TO CHAPTER IV

[62] As exemplified for example in the title of Pierre Macherey's book. In a far cruder register see Jean-Bernard Pouy's *Spinoza encule Hegel*, literally 'Spinoza fucks Hegel up', a science fiction novel in which *les Spinozistes* are a group of nomadic antistate rebels carrying out guerrilla type attacks on the forces of an authoritarian state.

[63] For recognising the decisiveness of Spinoza for reconstructing Marxist theory, if for nothing else, Althusser's greatness must be acknowledged.

[64] I refer here to two talks given by De Landa in Winter 1997 at the 'Institute of Contemporary Art' and the 'Architectural Association', both in London.

[65] Kenneth Surin offers a particularly lucid account of Amin's work from a perspective close to our own in his article "The Continued Relevance of Marxism' as a Question. Some Propositions'. A different critique, focusing on the "third-worldist" implications of Amin's position is contained in Robert Brenner's dispute generating article 'The Origins of Capitalist Development: A Critique of Neo-Smithian Marxism'.

[66] See their immensely important article 'Systems, Structures and Capitalistic Processes'.

[67] To redress the balance, De Landa is not the only reader of Deleuze and Guattari to ignore the seriousness and centrality of their engagement with Marx, it is a conjuring act common to most Anglophone readings. There are of course notable exceptions: Jameson, Hardt, Holland to name the most prominent; as well as those recent graduates from Warwick, who have done considerable work of great integrity, contributing to the formation of a Marxism, reinvented, reconfigured through the future oriented lenses of Deleuze and Guattari. The disappearance of Marx from reception of DeleuzeGuattari is merely another of those indices of his relatively recent, yet extremely thorough, excision from the set of commonly possessed intellectual coordinates.

[68] The section entitled 'The Molecular Unconscious' in *Anti-Oedipus* is one of the most important passages in DeleuzeGuattari's joint work dedicated precisely to this task.

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[69] It is relevant to point this out because it is of course in the field of biology that the question of vitalism originally arose and in which it has the greatest pragmatic implications.

[70] In an act of inestimable value to all those interested in the evolution of Deleuze's thought, his notes for these lectures have now been transcribed and made available to all on the WWW at imaginet.fr/deleuze.

[71] The full quote, in a discussion with Toni Negri, reads "I think Félix Guattari and I have remained Marxist, in our two different ways, but both of us." As is well known, the text upon which Deleuze was working at the time of his death was a book on Marx, apparently to be called *La Grandeur de Marx*, of which Negri has written: "In a text carefully drawn up [elaborato] by Gilles Deleuze, and which his untimely death prevented him from publishing, *La Grandeur de Marx*, it is precisely this realisation of Marxist theory which is studied and identified as an ontological dispositif/apparatus. Communism, Deleuze says, is a concept which becomes a 'common notion' through the power [puissance/forza] of the masses, a notion/name that corresponds to the way of existing/being of the multitude/masses, or rather that in becoming, it gives reality to the masses/multitude" (Negri 1998b 8). The translation of this section is in a private communication to me from Matteo Mandarini. For more on this, now nonexistent, book see Negri's *Exil* (1998c 28), and Holland (1997).

References

[72] A complete French translation, that used by Bataille, was published in 1929. Jacques Grinevald's introduction to the new scholarly English translation, the first complete one, of *The Biosphere*, 'The Invisibility of the Vernadskian Revolution', gives an excellent account of the political and scientificoideological background to the half-century long neglect of Vernadsky's work outside the Soviet Bloc. On the Soviet side of the Iron Curtain, Vernadsky has the status of a scientific giant, to the extent of there being institutes, scientific prizes, streets, a mineral (vernadite), mountain ranges, a lunar crater, and even a species of bacteria (one active in the formation of sea bottom manganese and iron ores) in his name; in addition to which, and more importantly, there was also a significant and well funded multidisciplinary research programme, Biogeochemistry, founded on explicitly Vernadskian lines. A fascinating study is waiting to be written of the 'positive' effects of the Soviet attempt to invent a *proletarian science*, a science in accord with the frozen form of Marxism developed to justify Soviet power, *Dialectical Materialism* (Diamat), or again a science that claims to follow from Engel's *The Dialectics of Nature*. Vernadsky's theses with their rejection of the idea of passive organisms being acted on by a distant, reified environment, his slogan of 'life is a geological force', and his research on the manifold ways in which the environment is shaped, formed in fact, in ways far beyond those piously bemoaned by naive environmentalists, are clearly ones that could be easily coopted and made to harmonise with the rhetoric of the Soviet state. This is clearly how Vernadsky's work was portrayed by one of his leading Soviet commentators, Andrei Lapo. That being said, Lapo is able to cite certain comments by Vernadsky himself that are sympathetic to Marx in a most superficial way: "I know Marx but little [...] but I think that the noosphere will be fully in accordance with his basic conclusions" (Vernadsky quoted by Lapo 1987 68). Vernadsky's concept of life as a geological force is in fact fully in accord with Marx and Engel's critique of the nature-culture division in *The German Ideology*, where they write against Feuerbach that "He does not see that the sensuous world around him is not a thing given direct from all eternity, remaining ever the same, but the product of industry and of the state of society [...] The cherry tree [...] was only a few centuries ago transplanted by *commerce* into our zone" (Marx and Engels 1976 47). The negative aspects of the campaign for such a science are all too well known, having their apotheosis in the Lysenko episode. From the perspective of the genealogy of Deleuze and Guattari's work we might observe that the ethologist Uexküll, from whom Deleuze and Guattari draw certain key concepts, was, like Vernadsky quite neglected in the West, yet championed in his native Estonia, where a centre at the University of Tartu still bears his name, and now carries out research in a field directly derived from his work, Biosemiotics. Beyond this trivial level, there are important ways in which themes common to both, are elements of the 'new biology' as described by Dorion Sagan (see the previous chapter for more on this). Finally, given the general intellectual background to this thesis it is worth noting that Vernadsky lectured at

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the Sorbonne in 1922 on 'Geochemistry', where he was in contact with Bergson, whose work he read and is explicitly influenced by. This Bergsonian influence is further felt in the work of Nicholas Georgescu-Roegen, the economist who has done most to create a thermodynamic economics explicitly building on both Vernadsky and Bergson, and indirectly on Bataille's general economics.

NOTES TO CHAPTER V

[73] This is Nick Land's judgement on Deleuze alone, in 'Making it With Death: Remarks on Thanatos and Desiring Production'. The idea that there is an unbridgeable chasm between Deleuze, Guattari and their contemporaries is derived from Land, but the one carved here is through very different materials, has a different shape, and so very different consequences. Deleuze himself has indicated, albeit for very different purposes, some of the components of his philosophical make up that mark him out as belonging to a tradition utterly at odds with that of his contemporaries; he remarks in a letter that "What I most detested was Hegelianism and dialectics" (1990/95 14/6), a moment in philosophical history in which most of his contemporaries are of course immersed to varying degrees; he notes too that he has "never worried about going beyond metaphysics or the death of philosophy, and [...] never made a big thing about giving up Totality, Unity, the Subject" (ibid. 122/88) one could add to this his utter rejection of Heidegger and phenomenology; his never having been a member of the CPF; his lifelong and outspoken adherence to Marxism; his utter refusal to succumb to psychoanalysis; his preference for Anglo-American over French literature (Deleuze and Parnet 1996 47ff), and for Hjelmslev over Saussure, ie. the turn in *Capitalism and Schizophrenia*, to semiotics. In the *Abécedaire*, Parnet poses Deleuze's tradition to him in terms of his preference for the 'z' in philosophy": Zen, Zarathustra, Spinoza, Leibniz, Nietzsche, BergZon (Deleuze), and one might oppose to this the three 'h's' of phenomenology: Hegel, Husserl, Heidegger.

[74] See Alain Badiou (1997 69) for an elaboration of the idea that Deleuze's philosophy is 'Classical'. By this Badiou denotes any philosophy that doesn't submit to Kant's critical injunctions, that acts as if the critical process invented by Kant was null and void; and that also opposes any of the much-vaunted "returns to Kant", to critique, etc. In so doing Badiou too seeks to sharply demarcate Deleuze's position from that of his erstwhile contemporaries, all of whom participate, in varying degrees, in this neo-neo-Kantianism.

References

[75] This formulation originates in Negri 'On Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*' 98. In an extremely unusual, highly provocative, and to my mind quite superb, analysis of *Leibniz and the Kabbalah* Allison Coudert writes that Leibniz and his close associate Francis Mercury van Helmont "both reject the corpuscular philosophy of the Cartesians and Gassendists for a vitalist philosophy that endows matter with force and activity" (Coudert 1995 54). Coudert performs a minor reading of Leibniz, exploring his relationship with, and in some cases, active production of Kabbalistic and alchemical texts that explodes his insulation by the philosophical establishment in a hermetic and teleological discipline by allowing these excluded traditions of thought to leak in and corrupt the philosophical body. She writes for example of Leibniz "Ghost-writing a book for a self-proclaimed Kabbalist [van Helmont, EA]" and notes dryly that this is an "extraordinary act for someone supposedly repelled by fanciful Kabbalistic theories" (Coudert 1995 13). A similar minor reading that incurred perhaps greater hostility is Betty Jo Teeter Dobbs' pioneering work on Newton's lifelong involvement with alchemy.

[76] The relevant works of biology to which I refer are Robert Rosen's *Life Itself: A Comprehensive Inquiry into the Nature, Origin and Fabrication of Life*, and Lynn Margulis and Dorion Sagan's *Microcosmos: Four Billion Years of Microbial Evolution*. The pertinent issues in these works are akin to those we had encountered in the critique of autopoiesis: the recognition that mechanism is not counterposed by vitalism but by complexity; and that the boundary lines separating the organism from the world are increasingly under challenge, such that the dominant characteristic of life lies in its symbiotic, contagious nature: the mutual interdependence of each and every entity, the process that Deleuze and Guattari characterise as machinic heterogenesis. This concept suggests that one can no longer ask about the identity, the bounded unity of a being, but rather about its complex interlocking with a network of forces that both cut through and transverse it by virtue of its surplus value of code, "the phenomenon [...] in which a part of a machine captures within its own code a code fragment of another machine, and thus owes its reproduction to a part of another machine" (Deleuze and Guattari 1980/87 339/285), and see the discussion of this concept above. The second direction from which this challenge comes is in that work that (to name four very different authors: Chalmers and Clarke, Samuel Butler, and Candace Pert) suggests that not even cognition can be contained within the brain or indeed the body, but is rather smeared across the world, and embodied, or immanent to matter.

References

[77] For some fascinating, if characteristically idiosyncratic, comments on the continuities between Spinoza and Bruno, see Ernst Bloch's 'Bruno and the Infinite Work of Art; Spinoza and the World as Crystal'. Bloch credits them both with espousing an immanent philosophy of "sorrowless and daybright materialism" (864), and sees them both as direct philosophical precursors of Marx.

[78] Fred Beiser's chapter on 'The Rise of Spinozism in Germany 1680—1786' gives a vivid account of the terror that Spinozist materialism and atheism inspired in the forces of authority, and principally in Kant.

[79] For a popular account see Margulis and Sagan 1997, for Margulis' technical work see her *Symbiosis in Cell Evolution*.

[80] Bruno, *De minimo* in *Opera latine conscripta* I, III, p. 135 quoted in Ordine 155.

[81] Steven Rose, one of DeleuzeGuattari's favourite biologists on whom they frequently rely for their understanding of the sciences of the brain, has superbly summarised a similar critique of the DNA myth thus: "to put the organism and its lifeline back at the core of biology [...] means replacing the static, reductive, DNA-centred view of living systems that currently pervades biological thinking with an emphasis on the dynamics of life. We need instead to be concerned with process, with the paradox of development by which an organism has simultaneously to *be* and to *become*" (Rose 1998 18). Roses's work on the *Conscious Brain* is referred to in both *A Thousand Plateaus* and in *What is Philosophy?*

[82] One can similarly detect the emergence of a nascent Spinozist influence in a wilfully heretical research programme in the field of Artificial Intelligence and Robotics. I refer to the work of Rodney Brooks at MIT, announced in his 1987 paper, 'Intelligence Without Representation'. Brooks' approach to building 'intelligent autonomous robots' is anti-representational, acentric, embodied, and bottom-up; and based on the argument that intelligence is not abstract and representational, but immanent and embodied. The Spinozist element of his work lies in his method, which is not "the usual decomposition of a system by *function* but rather a novel decomposition by *activity*" (Varela et al 1991 209); an account which directly recalls Deleuze's account of Spinozist bodies. Brooks further argues that "there is no single place where 'perception' delivers a representation of the world in the traditional sense" (Brooks quoted in ibid. 211). In Brooks work there is no representation, no central system, and no transcendence.

References

[83] See chapter two of Aryeh Kaplan's excellent, instructive translation of and commentary on the *Sefer Yetzirah: The 'Book of Creation' in Theory and Practice*, this text is both the most ancient and one of the most important works in Jewish Kabbalism, being the urtext of that literature which deals with the creation of both spiritual and physical Golems. Kaplan reminds us that in *Genesis* 1:2 "The Earth was chaos (Heb.: *tohu*) and void (Heb.: *bohu*)" and that "*Tohu* denotes pure substance that does not contain information. *Bohu* is pure information that does not relate to any substance". It is impossible to state the hylomorphic coupling more clearly. This coupling resonates through the ages and as I am concerned to show is one of the most important axiological structures of State thinking. The trope of the Golem is far reaching, for beyond its origin in Kabbalist speculations on the creative power of the word, it has exerted its influence upon, for example, Norbert Wiener one of the originators of cybernetics who saw fit to suggest that one of the earliest computers be named *Golem*, see also his collection of essays *God and Golem Inc.*, and has generally served as a metaphor for passive matter activated by a transcendent force; contrary to its recent use by blind technophiles as a fashionably recondite metaphor for 'matter out of control', it is in fact the model of State science *par excellence*. For a detailed treatment of the history of the Golem see G. Scholem's essay 'The Idea of the Golem', and Moshé Idel's monumental *Golem: Jewish Magical and Mystical Traditions on the Artificial Anthropoid*.

[84] For Augustine see Book VII of his *Confessions*, for Plotinus see the *Enneads* and Denis O'Brien's paper 'Plotinus on Matter and Evil', the quotes in my text are from *Enneads* I.8.3.35-40 and are cited by O'Brien. For the beginnings of a critique of the matter-evil complex see George Bataille's 1947 lecture on 'Evil in Platonism and Sadism', his review article of the same year, 'Du rapport entre le divin et le mal', as well as his ground breaking article on 'Base Materialism and Gnosticism'.

References

85 The price for such heresies has differed through history. Whereas now it might simply be difficult to secure an academic position or funding for certain kinds of research, Beiser, in his account of the multifronted war on Spinozism that formed the backdrop to the writing of the Kantian critiques, writes in his *The Fate of Reason* (Beiser 1987 48) that by 1710 in the German states there was a *Catalogus scriptorum Anti-Spinozanorum* held in Leipzig to which one had to subscribe in order to secure a teaching license. R. G. Mendoza writes that in Sixteenth Century Oxford "every bachelor and master who dared to diverge from Aristotle's *Organon*, or violate any point of it, was fined five shillings" (Mendoza 1995 24), indeed until the late nineteenth century both Oxford and Cambridge were closed to religious nonconformists. Nietzsche of course has written one of the most scathing attacks upon the complicity between the State and the management of University syllabi, paying particular attention to the peculiar intimacy between this kind of censorship and philosophy in the closing paragraphs of his 'Schopenhauer as Educator'. Bruno's own critique of the academic politics of exclusion, based principally upon his experiences at Oxford is worthy of deeper study and is a constant theme in his work. See in particular *The Ash Wednesday Supper* and *The Expulsion of the Triumphant Beast*, references are also to be found in *Cause, Principle and Unity*.

86 It should be noted that in his translation Paul Patton takes the bizarre step of rendering the sentence "la matière est déjà informée" as "matter is already informed", it is, needless to say, corrected here.

References

[87] This article is published in English in Denis Hollier's valuable collection of lectures and other material connected to *The College of Sociology 1937–39*, pp. 73–84. Regrettably the history, trajectories, and influences both intellectual and political of the College have not yet been treated to the detailed study they so richly deserve; it was without doubt one of the most important, innovative and seminal *events* of modern intellectual life. One of the reasons, I suspect for the absence of such a study lies in the nature of the concerns guiding the current orthodox reading of Bataille, crudely put, the 'transgressive' reading. The Bataille that emerges from the *Collège* period is somewhat inassimilable to this reading, focusing as he does on political and scientific, as opposed to literary and phenomenological questions. One admirable attempt to deal with this side of Bataille's work is Richman 1982. Issues arising from Vernadskian themes in Bataille, Nietzsche's critique of science, and related elements of superior materialism reappear in numerous places throughout this thesis. Bataille's work has suffered from an exceptionally thin reception, governed, for the most part, by both a narrow inspiration: that is to say, one that is largely defined by the scope of Derrida's interests in his essay 'From Restricted to General Economy: A Hegelianism Without Reserve'; directly related to this is a severe limiting of the Bataillan corpus, a Bataille composed of his erotic novels, and a careful selection of his more 'properly' philosophical texts, hence we are given the dominant image of the 'transgressive' Bataille. In the current work, a corrective to this picture is offered, by concentrating my attention upon Bataille's economic and political works: this is by no means a case of imposing a periodisation on to Bataille's career, for as is self-evident, he consistently produced work attuned to economic and political issues. Bataille's engagement with what he calls "the *general* problems that are linked to the movement of energy on the globe" (Bataille VII 27) ranges from the articles for *Contre-Attaque* and *Acéphale* in the 1930's, and culminates in the already mentioned *magnum opus*, *The Accursed Share*.

NOTES TO CHAPTER VI

[88] In Thesis XVI of the 'Theses on the Philosophy of History' Walter Benjamin writes that it is the task of the historical materialist critic to be "in control of his powers, man enough to blast open the continuum of history". The following thesis, elaborates on the theme, which permeates the theses, such that historical materialism is not a passive empiricism, but a constructivism, "based on a constructive principle" it seeks to "blast a specific era out of the homogeneous course of history [...] a specific life out of the era or a specific work out of the lifework". Again, "the awareness that they are about to make the continuum of history explode is characteristic of the revolutionary classes at the moment of their action" (Thesis XV).

References

[89] For a detailed exposition of the concept of the 'State-form', its differences from the classical Marxist model, and the necessarily transcendent nature of State thought see Hardt and Negri, *Labor of Dionysus: A Critique of the State-Form*. Of particular relevance is the section called 'Genealogy of the Constituent Subject', pp. 308-13.

[90] The construction of this abstract diagram is sketched out in greater detail in the previous chapter, 'Elaborations on Brunian Materialism in Deleuze'. Antonio Negri's work (1991 and 1994) on the identification of politics and ontology, in Spinoza and Descartes in particular, is also essential in this respect.

[91] Frances Yates offers a detailed account of the long history of heliocentrism, paying especial attention to the role of the sun in Neoplatonic and Neopythagorean mysticisms. As an index of quite how artificial the boundaries were between "science and Hermeticism in the Renaissance" (Yates 1964 155) she writes that "Copernicus' discovery came out with the blessing of Hermes Trismegistus upon its head, with a quote from that famous work in which Hermes describes the sun-worship of the Egyptians in their magical religion [...] And at the crucial moment, just after the diagram showing the new sun-centred system comes a reference to Hermes Trismegistus on the sun" (loc. cit.).

References

[92] For a snapshot of the range of different interpretations of the Brunian achievement *vis à vis* Copernicanism, and specifically, on the limitations of the latter, see Gatti (1999 102–6) and Yates (1964 237–9). Whilst Yates is concerned to show either that Copernicanism is marginal to Bruno's thinking or else that his writings on cosmology, far from being inspired by contemporary science are entirely indebted to hermeticism and Gnosticism, that he is concerned not with scientific, but with "Egyptian truth, magical truth" (Yates 1964 239). Gatti's book is dedicated to showing that Bruno is the first philosopher of the new science, and with regard to the issue at hand, that "Bruno never believed that Copernican cosmology in its original formulation abolished the celestial spheres. He claimed that discovery for himself" (Gatti 1999 104). Yates' project is extraordinary for two connected reasons worth mentioning here: first, whilst the great bulk of her scholarly output is dedicated to Bruno, and as a whole constitutes an invaluable body of work that almost singlehandedly kept interest in him alive in the Anglophone world in the middle part of this century. And that second, this body of work constitutes as unrelenting attempt to portray a one dimensional Bruno who is nothing more than "an out-and-out magician, an 'Egyptian' and Hermetist of the deepest dye" (Yates 1964 450); as such Yates' work acted as a dam for decades preventing the kind of work carried out by Gatti, Mendoza, and hopefully, myself. Yates was, as Lindsay has pointed out, perhaps the last in the long line of Catholic detractors of Bruno (the Catholic cosmologist Stanley Jaki is another), the manifestation of whose work has changed throughout the centuries, but whose object has remained constant: to sideline and belittle Bruno's work, or to reject him as a mad apostate. Mendoza, in his comparison of Bruno with Nietzsche, has pointed out that both "were grossly misunderstood by their contemporaries and by many of their modern interpreters as well [...] their highly subversive thinking was attributed by some of their enemies to mental derangement" (Mendoza 1995 219). Finally, for a comprehensive survey of the varieties of Bruno interpretation see Antonio Calcagno (1998). Unfortunately Gatti's book was published when I had almost completed the writing of this chapter, and consequently I have not been able to integrate her research as fully as I would have liked. The reader will note that the publication dates of Mendoza, 1995, Calcagno, 1998, and Gatti, 1999 taken together indicate an intensification of interest in the Nolan as we approach the four hundredth anniversary of his immolation in 2000.

[93] Smolin, whom we have encountered before, is rare amongst contemporary cosmologists in his positive assessment of Bruno for contemporary, post-complexity, cosmology.

References

[94] For Deleuze and Guattari philosophy is characterised as a constructivism with two interconnected yet distinct elements: "the creation of concepts and the laying out of a plane" of immanence, this latter "constitutes the absolute ground of philosophy, its earth or deterritorialisation, the foundation on which it creates its concepts" (44/41). Philosophy in this sense is coterminous with immanence, it is not that immanence is one concept among many that one can choose to think or not, at the same time it is not a master key, for "whenever immanence is interpreted as immanent *to* Something, we can be sure that this Something reintroduces the transcendent" (48/45); rather philosophy is defined by immanence in contradistinction to the transcendent which characterises religion. "Whenever there is transcendence [...] there is religion; and there is philosophy whenever there is immanence" (46/43). There is no one plane of immanence; it is the mark of great philosophers, as opposed to the "functionary" (52/51), Nietzsche's "officially recognised guild of pseudo-thinkers" (Nietzsche 1983 190), that they invent their own plane of immanence. It is this invention of planes that gives the specific mode of philosophical time as *stratigraphic*, for it is not a question of a linear succession, a list of names of the dead (a Necronomicon), but rather an interlacing of planes, no longer characterised by before or after, but rather above and below. "Philosophy is becoming, not history; it is the coexistence of planes, not the succession of systems" (59/59). An excellent, extended treatment of this matter is to be found in Bento Prado Jr. 1998.

All nonsourced quotations in the preceding paragraph are from Deleuze and Guattari's *What is Philosophy?*

References

[95] Recall that Norbert Wiener acknowledges Leibniz as the "patron saint for cybernetics" (Wiener 1994 12) for two reasons: first, for anticipating mathematical notation and second for constructing an early symbolic logic; but one can also construe a third reason, and that is for the implications of Leibniz's thought for the mechanical actualisation of thought "in the metal". However as Ernst Bloch argues, the credit here should go to Lull, whose combinatory circles take pride of place as the first abstract diagrams of a calculating device, and now "Lull's arithmeticised dream has been turned into a whole intellectual industry, with speed as witchcraft" (Bloch 1986 652). Both Yates and Bloch show that a considerable part of Bruno's work, principally his earlier texts on mnemonic techniques, constitute an attempt to improve upon or rationalise the Lullian art. It should though be born in mind that, as with all of the other figures cannibalised for Bruno's syncretism, his interpretation of Lull is "even more peculiar, and more remote from the medieval Lull, than [that found] in normal Renaissance Lullism" (Yates 1966 207). Once again then we see Bruno's decisive stamp on one of the key figures of the Deleuzian genealogy. Calcagno is right to point out that "the exact relationship between Leibniz and Bruno has never been established" (Calcagno 1998 38), however Bruno's influence on Leibniz is wide, as is evidenced by the frequency of his appearances in *The Fold: in brevis*, the Leibnizian monad is taken from Bruno, principally for its role in the transformation of "Neoplatonic emanations [...] to a large zone of immanence" (Deleuze 1993 24); the supposition of a universal parasitism is Brunian; as is the Leibnizian *complicatio*.

[96] In what is, I suppose, a landmark essay 'Modernity— An Incomplete Project' Jürgen Habermas notes the frequency, dating back to the fifth century, of the use of the term 'modernity' to denote "the consciousness of an epoch that relates itself to the past of antiquity, in order to view itself as the result of a transition from the old to the new" (Habermas 1985 3.)

[97] Antonio Calcagno's interesting analysis of Bruno's reads his entire philosophy as dedicated to a working out of this identity of unity and multiplicity.

[98] This is a common theme in Nietzsche's work. See in particular the collection of aphorisms under this title in *Philosophy and Truth*, pp. 69—76; and the notion that the perfect nihilist, the Nietzschean, pursues the ideal of the *great health* (1974 § 382).

[99] Marx and Engels have a similar critique of Feuerbach in *The German Ideology*, "Feuerbach's 'conception' of the sensuous world is confined on the one hand to mere contemplation of it, and on the other to mere feeling; he posits 'Man' instead of 'real historical man'. 'Man' is really 'the German'" (1976 48).

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[100] For an account of the role that the rising tide of Spinozist inspired *Natur philosophie* had upon much of Kantianism see Fred Beiser's chapter on 'The Rise of Spinozism in Germany 1680–1786' referred to above. Zammito's work is also indispensable for understanding the role that opposition to Spinozism played in inspiring the critical system, and in particular the third critique, again suggesting that Kant is principally motivated by a need to combat hylozoism. Zammito goes so far as to suggest that it is impossible to understand Kantianism without considering this polemic and its political dimensions.

[101] Between the completion of the manuscript of *The Book of the Revolutions* in 1530 and its eventual publication, Copernicus vacillated, terrified by the possible consequences of the public availability of his book and his neurotic obsession with maintaining a Pythagorean secrecy. Like Copernicus, Darwin too vacillated in publishing his genuinely revolutionary findings, unlike Copernicus, Darwin *was* genuinely terrified about the social, political and religious conflagration that his work might, and did, spark. Darwin's fears are minutely detailed in Desmond and Moore's magnificent biography. When Copernicus' book was eventually published it came with a preface by the cofounder of Lutheranism, Andreas Osiander, who unlike his colleagues, Luther himself and Melanchton, was favourable to Copernicanism. There is some historical controversy as to Copernicus' attitude towards this preface, indeed it is not even certain that he was in any position to read it, as the first printed copy of his book arrived only hours before his death by which time his mind had apparently become quite as unhinged as the Earth soon would be. The point of this preface, and my sole reason for mentioning it, is that it describes the contents of the *Revolutions* as "hypotheses [which] need not be true nor even probable" (the full text of the preface can be found in Koestler 1959 573 n. 59).

[102] *Eroico furore* is the title of one of Bruno's books, the most recent English translation of which is that by Paul Memmo entitled *Giordano Bruno's The Heroic Frenzies*, (Chapel Hill: University of North Carolina Press, 1964).

[103] This quotation has a page reference, rather than a section number as is usual with Nietzsche because it is the motto of book five 'We Fearless Ones' of *The Gay Science*. According to Walter Kaufmann's commentary, this splendid quotation comes from the Vicomte de Turenne, the great seventeenth century French general.

References

[104] That "Nietzsche was aroused from his dogmatic slumber by Darwin" (Kaufmann 1962 142), is a commonplace. But what is less remarked upon is that whilst Nietzsche had a long and sustained engagement with Darwin, it is substantially a Darwin mediated through the book that Nietzsche called variously a "treasure house" and 'the most significant philosophical work to have appeared in the last hundred years'— Friedrich Lange's *History of Materialism*. Of the small, but growing literature on the influence, upon Nietzsche, of Lange's astonishing and compendious three volume work, I have consulted the work of Stack (1983), and Ansell Pearson (1988).

A detailed examination of the complex set of relationships— Nietzsche and Lange, Nietzsche and Darwin— is beyond the scope of the present thesis. However, I would like to examine some aspects of the latter elsewhere. Especially worth pursuing would be the resonances of Darwin's horrendous realisation that "It is absurd to talk of one animal being higher than another [...] *We* consider those, where the intellectual faculties [are] most developed as highest.— A bee doubtless would [use] instincts [as a criterion]" (Darwin quoted in Desmond and Moore 1997 232) in Nietzsche's diagnosis of nihilism and his coterminous project of perspectivism. It might also be pointed out, although not pursued here, that Spinoza had advanced an equally radical perspectivism in his polemical letters on superstition to Boxel. Spinoza writes "when you say that if I deny to God the acts of seeing, of hearing, of attending and of willing etc. [...] I suspect therefrom that you believe that there is no perfection greater than that which is unfolded in the said attributes [...] I believe that a triangle, if only it had power of speech, would say in like manner that God is eminently triangular, and a circle would say that the Divine Nature is eminently circular" (Spinoza 1966 LVI). One of the principal objects of Nietzsche's implacable philosophical scorn is the skin of humanism that bounds the dominant traditions of philosophical history, an anthropomorphism stretched between Plato and Kant. An anthropomorphism, that Spinoza had attempted to banish from his own thought: "All the prejudices I here undertake to expose depend on this one: that men commonly suppose that all natural things act, as men do, on account of an end" (Spinoza 1985 E I appendix). There is a direct line from this Spinozism to Marx's critique of reification. This humanism which grounds an instrumentalism ("to 'humanise' the world, ie. to feel ourselves more and more masters within it", Nietzsche 1968 § 613) towards the cosmos is skewered by Nietzschean perspectivism and its speculations upon the possibilities of nonorganic perception and the nonhuman senses. Nietzsche writes that "interpretations" by different species of animals and insects other "than merely human ones are perhaps somewhere possible" (Nietzsche 1968 § 616). The existence of such senses is now supported by solid empirical evidence ranging from studies of the deep sea fish that can see light at wavelengths well beyond the range perceptible to the human (eg. Pain 1999), to the sonic abilities of bats and dogs, and beyond the senses to von Uexküll's writing on the temporalities of different organisms ranging

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from the tick to the tree, to a bacteria.

The line of thought opened here, has, it can be argued, culminated in, or at least currently arrived at, what Ilya Prigogine has called *the end of certainty*. In Prigogine's interpretation, quantum mechanics, is the apotheosis, and actualisation, of the analysis of nihilism and its transvaluation that we have developed out of Nietzsche. Prigogine writes that "we are on the eve of the 'probabilistic revolution', which has been going on for centuries. Probability is no longer a state of mind due to our ignorance, but the result of laws of nature" (Prigogine 1997 132): we must henceforth confront not a relativity of truth, but a truth of the relative. (See Deleuze 1993 20, 1985/89 191/147 and Deleuze and Guattari 1991/94 55/54, 123/130).

NOTES TO APPENDIX

[105] All notes are my own, excepting numbers 1, 17, and 21 which were added by the editors of Bataille's *Œuvres Complètes*. I have however made an obvious addition to note 1. The revised text of this talk, delivered at the 'Collège Philosophique' on Monday 12 May 1947, was published as 'Sade et la morale' in *La profondeur et le rhythme*, the third volume of the *Cahiers du Collège Philosophique*. It is reprinted in Bataille's *Œuvres Complètes* VII pp. 445–52.

The principal reason for including this piece rather than the later article is that whilst in the latter Bataille tightens or clarifies some of his formulations, it lacks the instructive discussion session that follows the present lecture which falls within a crucial period for modern French Sade criticism, that is the appearance of a cluster of questions which solidified around the debate as to Sade's responsibility for Nazism. On this issue, Deleuze has described Bataille's *Eroticism* as "a text that ought to invalidate all theories relating Sade to Nazism, Georges Bataille explains that the language of Sade is paradoxical *because it is essentially that of a victim*" (Deleuze 1989 17). This lecture contains the germ of those ideas. Maurice Lever, in his recent biography of Sade, *Sade: A Biography*, locates the beginnings of this "debate" in Raymond Queneau's *Lectures pour un front*, published in his *Batons, chiffres et lettres* (Paris: Gallimard, 1965), in which the latter writes that "the world imagined by Sade and willed by his characters (and why not by Sade himself?) was a hallucinatory precursor of the world ruled by the Gestapo [...] with their horrors no longer confined within a man's head but practised by thousands of fanatics. Disagreeable as it may be, philosophies end in charnel houses." Lever notes that this text appeared on "November 3, 1945. Six months earlier the Allies had liberated Buchenwald." In the present article, as in his prescient and then almost singular disengagement of Nietzsche from Nazism in 'Nietzsche and the Fascists' (*Acéphale* 2, January 1937). Bataille took a position diametrically opposed to that of the bulk of his censorious contemporaries. Bataille's reading of politically

References

or ethically "dangerous" texts and authors represents a serious challenge and a powerful alternative to the vacuities of the procedures associated with deconstruction and its subdisciplines in this respect. Starting out from Bataille's approach here, it is apparent that there is substance to be extracted from an examination of the panoply of responses generated by the three most prominent *affaires* in twentieth century French thought (those focused around Sade, Nietzsche, and later Heidegger) that would allow for a more sophisticated, and infinitely more productively political approach to the immanence of violence to what is called culture than has hitherto been allowed by the dominance of deconstructive concerns in these areas. That Bataille played a crucial role in, and took a revolutionary and astonishingly far sighted position on, the first two of these *affaires*, is worth noting here, but is, unfortunately, beyond further comment. We can simply note that the positions taken by Bataille on Nietzsche and Sade when both were stigmatised and anathematised as complicit, beyond the grave, with Nazism by virtually the entirety of the French intelligentsia is testimony to the depth and untimeliness of his reading, to his absolute disregard for the conventions of intellectual good taste, and to his courage in pursuing directions and thought that ran in directions absolutely counter to those sanctioned by the moral and intellectual authorities of bourgeois France. True to his intentions to live by Nietzsche, Bataille is almost alone in that he would escape Nietzsche's castigation of academic philosophy as having disturbed noone (see the third section of 'Schopenhauer as Educator'). It is for the maintenance of a *disturbing* Bataille that I have translated this piece. The questions to be asked are crystallised by what Gilles Deleuze and Félix Guattari have called that reterritorialisation of philosophy on Nazism effected by Heidegger of which they write, it is a question of a geophilosophy, of the "constitutive relationship of philosophy with nonphilosophy" (Deleuze and Guattari 1990/94 104). There is not the space here for full exposition but I can only take the opportunity to note the path not to be taken, that of the "strangest commentaries [...] complicated and convoluted arguments" that only leave us "still in the dark" (ibid.), this is the interlocking set of texts comprising Jacques Derrida's *Of Spirit: Heidegger and the Question*, J-F Lyotard's *Heidegger and 'the jews'*, and Philippe Lacoue-Labarthe's *Heidegger, Art and Politics*. What I would suggest is that, on this and so many other issues the current 'official', Bataille, that inaugurated by Derrida, is a severely inadequate, and at the very least, domesticated version.

References

[107] See Nietzsche, *Will to Power* (1968) § 676, "We are in the phase of modesty of consciousness."

[107] A critical confrontation here would be with Plotinus, principally his statement in *The Enneads* I. 8 'The Nature and Source of Evil', that "the cause of evil is matter."

[108] Bataille had begun this characterisation of the figure of Platonism in a review article of Simone Pètrement's book *Le dualisme dans l'histoire de la philosophie et des religions* entitled 'Du rapport entre le divin et le mal' (XI 198—207). Here he had outlined two of the themes of the current lecture: first the notion that for Plato evil lies in "the subordination of reason to the unchaining of the passions" (Bataille XI 208); his contention that contrary to Platonism it is not reason, but passion that is allied to the divine. This is the basis of Bataille's delirious materialism, the location of an "ungraspable horror" (Bataille XI 207) in the heart of the sacred. One could also trace this theme through Enlightenment progressivism and the subsequent founding assumptions of anthropology. An important moment to examine in this regard would be Kant's critique of the "despotism of desires" at *Critique of Judgement* § 83.

[109] See Sade's various arguments that it is imperative to "get rid forever of the atrocity of capital punishment, because the law which attempts a man's life is impractical, unjust, inadmissible" (Sade 1966/91 493/310), as a principle of the Republican, atheist state. In his *Libidinal Economy* Lyotard notes that "Sade clearly says that the death penalty is an infamy because it is a law, that is to say a regulation of intensities, whereas murder if it is passionate, would be no more a crime than is orgasm" (Lyotard 1993 182). The Sade that Bataille is concerned with throughout this lecture is the "Sade who is Spinoza and Lucretius, the Sade of 'Français, encore un effort pour être républicains', a libidinal materialist, the one we here desire and desire to sustain" (Lyotard 1993 64).

[110] Sade argues that the the law cannot commit murder "since the law, cold and impersonal, is a total stranger to the passions which are able to justify in man the cruel act of murder. Man receives his impressions from Nature, who is able to forgive him this act; the law, on the contrary, always opposed as it is to Nature and receiving nothing from her, cannot be authorised to permit herself the same extravagances: not having the same motives, the law cannot have the same rights" (Sade 1966/91 493/310).

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[111] This recalls in many ways Nietzsche's coruscating attack on the "weakness of the outlines and the dullness of the colours in the picture of modern life" (Nietzsche 1983 149). Artaud's looking back to the medieval days of mysticism where, as Agamben says, the everyday was not so horribly banal as it is now, but was "the speck of impurity around which experience accrued its authority, like a pearl" (Agamben 1993, 14). Thanks to Catherine Mary Dale for this reference.

[112] There is a discussion of this strange phrase in the question session following the lecture, that is, on p. 377 of the French edition.

[113] See Pierre Klossowski's critique of the concept of the general will on the basis that "logic then commands that we take the right to exist away from him who remains outside the species and is thus necessarily a monster," in (Klossowski 1991 125). Sade again "now, would it not be to carry your injustice beyond all limits were you to send the law to strike the man incapable of bowing to the law?" (Sade 1966/91 493/310).

[114] The phrase used by Bataille here is "une espèce de culbute de lui-même"; it is worth noting that "culbuter quelqu'un" means to "fuck somebody over."

[115] For earlier elements of Bataille's understanding of the relationships between immanence and transcendence see Bataille 1992, especially pp. 157—60.

[116] See Bataille, 'Attraction and Repulsion I: Tropisms, Sexuality, Laughter and Tears,' in (Hollier 1988 103—12), especially pp. 109—12.

[117] See Gilles Deleuze and Félix Guattari 1980/87 229/187, and Deleuze 1968/94 55/37 on this leap. One should also bear in mind the consistent appearance of this figure in Bataille's *On Nietzsche*.

[118] In 'Sade et la morale,' (Bataille VII 448) Bataille makes his point more clearly: "This table upon which my hand is resting is as distinctly separated from me as could be: the proximity changes nothing. There is as much proximity between this table and me as if the table were on another planet."

[119] See also the 'Letter to X, Lecturer on Hegel', that is Alexandre Kojève, in which Bataille writes of the "open wound that is my life," in (Hollier 1988 90.)

[120] Bataille is using this reference in two ways, initially as a play on the table whose physical existence he had been interested in earlier, and second as a pointer towards the concept of a transcendental table of law.

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121 The phrase used by Bataille is "sortir de ses gonds," the expression "sortir (hors) de ses gonds" means "to lose one's temper, to fly off the handle."

122 In 'Sade et la Morale' (Bataille VII 450), Bataille writes "If one loses the control that reason had over violence (the sacred), human possibility fades away."

123 The audience, of course, would have heard the second sense of "sauter," that is fucking.

124 The context of this line of argumentation lies in Bataille's reintegration of experiences of horror (more broadly, perhaps crudely, the transgressive) within the remit of human experience. One of Bataille's most powerful formulations of this position runs as follows: "Auschwitz, like the Pyramids or the Acropolis is the achievement, the sign of man. Man's image is henceforth inseparable from a gas chamber...," (Bataille XI 226). A further aspect of this lies in Bataille's preoccupation with the "what does not yet exist", but in a way that completely escapes any dialectic, any truck with teleology, with project orientated doctrines of his and our time: his reading of Sade is conditioned by the impossibility of his being read without a "vulgar impotence... a pretentious hypocrisy" by those whose relationship with Sade "resembles that of primitive subjects in relation to their king, whom they adore and loathe, and whom they cover with honors and narrowly confine," (Bataille II 54). The figure of Sade is central in these two respects to the development of Bataille's theory of heterology. For these questions see 'The Use Value of D. A. F. de Sade', (Bataille II 54—69).

125 The complexity of this paragraph lies within Bataille's extended use of the leap, *le saut*, here the suggestion is that contemplation of the moral leaps that Sade's characters make puts one into a contagious communication with the unknown, the impossible. The strength of this lies in the introduction of *hauteur*, a *saut en hauteur* is a high jump in athletics. The possibilities offered by a knowledge of Sade's work is doubly inscribed on a plane of representation by the overbearing weight of the deictic in the final phrase.

126 'A propos de récits d'habitants d'Hiroshima' (Bataille XI 172—87), a review article of John Hersey's book *Hiroshima* (London: Penguin, 1990).

127 In 'The Use Value of D. A. F. de Sade' Bataille suggests that a post-revolutionary society would require, in addition to the economic and political organisation, an "antireligious and asocial organisation having as its goal orgiastic participation in different forms of destruction," he goes on to argue that "this organisation can have no other conception of morality than the one scandalously affirmed for the first time by the Marquis de Sade," (Bataille II 69).

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[128] On this involution in Kant consider Deleuze's claim that "this is what Kant saw so profoundly in the *Critique of Pure Reason*, at least at one point: the manner in which the speculative death of God entails the fracture of the I, the simultaneous disappearance of rational theology and rational psychology." (Deleuze 1968/94 117/86).

[129] Bataille concludes 'Sade et la morale' with a suggestion that might be derived from this brief exchange. "In order for words to correspond to my passion, I would indeed have to renounce the enchaining, I would have to pass from 'discourse' to poetry. It is in this sense that Kant's judgment was sound when he made art the model of the moral act, since art is the only domain in which the end is identical with the means. Bu this is still insufficient: discourse is not raised to the level of poetry simply by abandoning lucidity.' (Bataille VII 452).

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